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A survey of the school dropout problem in the United States focuses attention on (1) defining school dropouts, (2) the magnitude of the dropout problem, (3) types and extent of research on school dropouts, (4) why pupils drop out of school, (5) factors leading to early school withdrawal, (6) what happens to school dropouts, (7) employment opportunities for dropouts, and (8) measures successful in reducing the number of dropouts. Research on the subject of early school withdrawal is found to be abundant, but results are found to be inconclusive and noncomparable. A classificatory scheme is devised with which research results can be made more comparable. Significant literature pertaining to each topic is reviewed and areas where research is lacking are pointed out. An extensive bibliography lists 149 selected references. (TT)

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> During the decade 1960-70 an unprecedented 26 million young people, with varying degrees of preparation, will pass out of the schools and into the labor market. If some revolutionary improvement has not been brought about, at least 7.5 million of them will be school dropouts--and 2.5 million of these, it is estimated, will have had less than eight years of formal education.

So predicted Schreiber (110:3),[1/] Director of the NEA Project on School Dropouts. It appears that the public schools of our nation are not achieving the widely accepted ideal of a high-school education for every able American youth.

Concern for school dropouts is not new. As early as 1872, when the high-school graduate, rather than the dropout, was the exception, a paper entitled "The Early Withdrawal of Pupils from School: Its Causes and Its Remedies" was presented to the annual session of the National Education Association, Department of Superintendence (53). Since that time an overwhelming number of articles of opinion and reports of empirical research on the school dropout have been published. One comprehensive investigation of research literature on the subject (11) found 800 references published before June 1956.

Schreiber explains the growing emphasis being placed upon the dropout problem in this way: "Society's concern, buttressed by rising rates in live births, unemployment, delinquency, youth crime and welfare costs, have catapulted it forward and made it one of education's major problems." (112:8) Strom (119:25) states that the problem today is the smaller demand for the kinds of work dropouts can perform.

During this decade, communities, states, the federal government, and private organizations all have stepped into the campaign against early school withdrawal.

In 1961, the NEA Project on School Dropouts was begun under a Ford Foundation grant. The purpose of this three-year project was to provide consultant, clearinghouse, and recommendation services to state and private groups. The staff of the Project conducted a holding power study of 128 large city school systems (106). It sponsored symposia and published several definitive books (110; 111), including one entitled Dropout Studies: Design and Conduct (112) which is of special interest to this summary.

1/ Numbers in parentheses refer to items in the references listed at the end of this summary.

President John F. Kennedy focused attention on the school dropout as a national problem in his 1963 State of the Union Message to Congress. In the summer of 1963, he allocated $2[illegible],000 of his special "emergency" fund to help schools and communities wage a dropout campaign (129).

President Johnson has continued to keep the nation aware of this persistent problem. In his Educational Message to Congress, January 12, 1965, he summed up the nation's concern for the dropout in this way:

> Every child must be encouraged to get as much education as he has the ability to take. We want this not only for his sake--but for the Nation's sake. Nothing matters more to the future of our country: not our military preparedness--for armed might is worthless if we lack the brain power to build a world of peace; not our productive economy--for we cannot sustain growth without trained manpower; not our democratic system of government--for freedom is fragile if citizens are ignorant.

Congress has responded by allocating substantial financial aid to assist in developing and maintaining programs directly or indirectly related to the problem of school dropouts.

Who Is the School Dropout?

The difficulty in assessing the "dropout problem" begins with the first step of the process: defining dropout. Some school systems and investigators differentiate between "voluntary" and "involuntary" dropouts. The dropout classified "voluntary" in one study may be considered "involuntary" in another.

Segel and Schwarm (113) illustrated the use of such labels and the differing results when dropout rates were computed. Involuntary withdrawals, in their study, were "those over which the schools were presumed not to have control" and included those who (a) left school, whereabouts unknown, (b) were excused for being physically disabled or uneducable, (c) drafted or institutionalized, or (d) were deceased. Voluntary dropouts were those who (a) entered employment, (b) were needed at home, (c) enlisted in the Armed Forces, (d) married, (e) dropped, not employed or needed at home, and (f) were unable to adjust, etc. (113:2) When they computed dropout rates, Segel and Schwarm found that for one group of cities during one year of the study, the total dropout rate was 9.2 percent, while the voluntary dropout rate was 4.7 percent (113:7). According to their definition, then, slightly over half of the withdrawals could have been prevented by the school.

Voss, Wendling, and Elliott (134) also believe that voluntary and involuntary dropouts

TABLE 1.--ESTIMATED RETENTION RATES,[a] FIFTH GRADE THROUGH COLLEGE ENTRANCE, IN PUBLIC AND NONPUBLIC SCHOOLS: UNITED STATES, 1924-1932 TO 1957-1965

Grade	Number continuing per 1,000 pupils in fifth grade in:										
	1924-25	1930-31	1934-35	1940-41	1942-43	1948-49	1950-51	1952-53	1954-55	1956-57[b]	1957-58[b]
1	2	3	4	5	6	7	8	9	10	11	12
Fifth	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sixth	911	943	953	968	954	984	981	974	980	985	994
Seventh	798	872	892	910	909	956	968	965	979	984	985
Eighth	741	824	842	836	847	929	921	936	948	948	954
Ninth	612	770	803	781	807	863	886	904	915[c]	930	937
Tenth	470	652	711	697	713	795	809	835	855	871	878
Eleventh	384	529	610	566	604	706	709	746	759	785	810
Twelfth	344	463	512	507	539	619	632	667	684	724	758
High-school graduates	302	417	467	481	505	581	582	621	642	667	710
Year of high-school graduation	1932	1938	1942	1948	1950	1956	1958	1960	1962	1964	1965
College: First-time students	118	148	129	[d]	205	301	308	328	343	357	378

Source:

U.S. Department of Health, Education, and Welfare, Office of Education. Digest of Educational Statistics, 1966. Washington, D.C.: Government Printing Office, 1966. p. 7.

a/ Rates for the fifth grade through high-school graduation based on enrollments in successive grades in successive years in public elementary and secondary schools and are adjusted to include estimates for nonpublic schools. Rates for first-time college enrollments are based on data supplied to the U.S. Office of Education by institutions of higher education.

b/ Preliminary data.

c/ Revised since originally published.

d/ Retention rates not calculated because of the influx of veterans in institutions of higher education.

should be studied separately, and that voluntary dropouts should be further divided into those who are retarded and those who are capable.

It seems that schools and investigators should decide before gathering data what kinds will be most valuable for their purposes of study.

The NEA Project on School Dropouts, the U. S. Office of Education, and several other national educational organizations have cooperated in formulating a standard definition for the term dropout, which school systems may use in pupil accounting and research studies (112:72-73): A dropout is "a pupil who leaves school, for any reason except death, before graduation or completion of a program of studies and without transferring to another school." The description continues:

> The term "dropout" is used most often to designate an elementary or secondary school pupil who has been in membership during the regular school term and who withdraws from membership before graduating from secondary school (grade 12) or before completing an equivalent program of studies. Such an individual is considered a dropout whether his dropping out occurs during or between regular school terms, whether his dropping out occurs before or after he has passed the compulsory school attendance age, and, where applicable, whether or not he has completed a minimum required amount of school work.

How Great Is the Dropout Problem?

Determining the Number of Dropouts

Two methods are commonly used to determine the number of school dropouts. The U. S. Office of Education usually bases its statistics on school membership in grade 5 or grade 9, and the number of pupils who graduate eight or four years later. The U. S. Bureau of the Census determines the number of dropouts by subtracting the number of children in school from the number of children of school age during any given year.

The first method may be termed a longitudinal study. Among its drawbacks is the fact that pupil acceleration and retention in grade during the period of time studied are not taken into account. The second method does not

account for those children who are prevented by physical or mental handicaps from enrolling in school. However, data computed by these methods may be considered fairly accurate for the nation as a whole (112:8).

In pupil accounting at state and local levels, the additional factor of pupil mobility must be considered. Total graduates subtracted from total enrollees will yield misleading figures unless transfers, both in and out, are taken into account. Segel and Schwarm (113) demonstrated this. In their study of holding power, one group of cities had a yearly gain in membership owing to transfers into the systems. Another group of cities gained over 7,000 pupils between June and September of one year, while in the two succeeding years they lost pupils (113:4). Had the pupils simply been counted at the beginning of the ninth grade and recounted upon graduation, results would have been much different and very inaccurate.

An additional problem is that some studies count withdrawal during the academic year only; others include those who fail to return in the fall.

Because these varying methods of determining the number and rate of dropouts determine the results, and hence the interpretation and meaning of results, comparisons among school systems and among states are difficult, if not impossible.

Most writers agree that the best method for determining dropout rates in local school systems is a yearly study in which each pupil is accounted for. Segel and Schwarm (113:19-29) illustrated how this might be done. The U. S. Office of Education touched on this problem in Pupil Accounting for Local and State School Systems (97), as did Coplein (30). Schreiber, Kaplan, and Strom (112) dealt with this problem in depth. They suggested methods of calculating holding power and dropout rates, provided a guidance form for individual pupils, and proposed guidelines for reporting data.

Numbers of Dropouts

Dropout rates for the nation--Table 1 shows for selected years the number of pupils in each succeeding grade, beginning with 1,000 pupils in grade 5. Since 1950, more than half the pupils from grade 5 eight years earlier were graduated from high school. The number has steadily increased, so that about 71 percent of the nation's fifth-graders in 1957-58 stayed in school through high-school graduation in 1965.

Table 2 gives the percent of school-age children enrolled in school during selected years at selected age levels. The figures show a steady, though irregular, increase in percent enrolled at each grade level.

Duncan (39:43) viewed the changes in educational attainment in the United States in a different way. Reporting on a sample of 40,664,000 men who were sampled in the March 1962 Bureau of the Census Population Survey, she noted that for white males sampled, the mean number of school years completed rose from 9.4 years for those who reached age 16 between 1916 and 1920, to 12.1 years for those who reached age 16 between 1951 and 1957. For sampled nonwhite males who reached 16 between 1916 and 1930, and between 1951 and 1957, the mean number of school years completed rose from 6.6 years to 10.0 years.

Dropout rates by state--Table 3 gives by state the ninth-grade enrollment in public schools in fall 1962 and the number and percent graduating in 1966, four years later. These holding-power rates are not completely comparable because of interstate migration and shifts between public and nonpublic schools during the four years.

Numbers of dropouts by sex--Most studies report that a larger percentage of dropouts are boys than are girls. Blough (11:42) reviewed 83 research studies in this area; 69 reported a marked difference in dropout rate by sex, and 61 indicated a greater proportion of boys. Segel and Schwarm (113:9) reported that boys leave school at a substantially higher rate, and that the trend is proportionately higher in the large cities. Blesdoe (10) noted that while

TABLE 2.--PERCENT OF SCHOOL-AGE POPULATION ENROLLED IN SCHOOL,[a/] 1954 TO 1964

Year	Age groups				
	7-9	10-13	14-15	16-17	18-19
1	2	3	4	5	6
1954 ...	99.2%	99.5%	95.8%	78.0%	32.4%
1955 ...	99.2	99.2	95.9	77.4	31.5
1956 ...	99.4	99.2	96.9	78.4	35.4
1957 ...	99.5	99.5	97.1	80.5	34.9
1958 ...	99.5	99.5	96.9	80.6	37.6
1959 ...	99.4	99.4	97.5	82.9	36.8
1960 ...	99.6	99.5	97.8	82.6	38.4
1961 ...	99.4	99.3	97.6	83.6	38.0
1962 ...	99.2	99.3	98.0	84.3	41.8
1963 ...	99.4	99.3	98.4	87.1	40.9
1964 ...	99.0	99.0	98.6	87.7	41.6

Source:
U.S. Department of Commerce, Bureau of the Census. School Enrollment: October 1964. Current Population Reports, Population Characteristics, Series P-20, No. 148. Washington, D.C.: Government Printing Office, February 8, 1966. p. 2.

a/ Enrollments counted in October of each year; comprises public- and private-school enrollment.

boys comprised 50.2 percent of the general population studied, they accounted for 59.1 percent of total dropouts. Bowman and Matthews (14:86), on the other hand, concluded that while a slightly higher percentage of dropouts were boys, the difference was not significant.

Table 4 shows the percent of dropouts by sex from selected studies.

Numbers of dropouts by age--Most studies have shown that the greatest number of withdrawals occur when the student is 16 years old. This age corresponds with the most common state maximum compulsory attendance age. However, as Table 5 shows, a substantial number of students withdraw at age 15 or younger, and a large number stay in school until they are 17 and 18 or older. It appears that boy dropouts are slightly older than girl dropouts when they withdraw.

Numbers of dropouts by race and ethnic origin--Because of the number of socioeconomic variables often closely associated with race and ethnic origin, numbers of dropouts classified in this way may have value only in reflecting the extent of these differences. Nevertheless, differences are noted.

TABLE 3.--PUBLIC HIGH-SCHOOL GRADUATES IN 1965-66 AS A PERCENT OF NINTH-GRADERS IN FALL 1962

State	High-school graduates, 1965-66	Ninth-graders, fall 1962	Graduates as percent of ninth-graders four years earlier
1	2	3	4
Total U.S. (incl. D.C.)..	2,356,920	3,050,890[a]	77.3%
New England	122,428	156,028	78.5
Connecticut ..	30,611	38,057	80.4
Maine	12,271[b]	15,979	76.8
Massachusetts.	58,500[c]	75,647	77.3
New Hampshire.	7,545	9,849	76.6
Rhode Island .	8,814	10,606	83.1
Vermont	4,687	5,890	79.6
Mideast	440,831	378,567	7[illegible][d]
Delaware	5,952	7,515	79.2
Maryland	41,583	53,525	77.7
New Jersey ...	76,000	92,021	82.6
New York	173,224	218,254	79.4
Pennsylvania .	138,970	N.A.	...
District of Columbia ...	5,102[e]	7,252	70.4
Southeast	509,705	747,309	68.2
Alabama	44,160	68,209	64.7
Arkansas	24,976	36,350	68.7
Florida	62,222	86,792	71.7
Georgia	51,842	79,590	65.1
Kentucky	34,738	53,344	65.1
Louisiana	39,722	58,500	67.9
Mississippi ..	27,926	42,927	65.1
North Carolina	66,187	98,283	67.3
South Carolina	33,539	47,894	70.0
Tennessee	45,803	67,399	68.0
Virginia	52,417	70,075	74.8
West Virginia.	26,173	37,946	69.0
Great Lakes	476,704	590,789	80.7%
Illinois	120,246	147,882	81.3
Indiana	64,024	82,142	77.9
Michigan	106,000	131,078	80.9
Ohio	130,751	164,578	79.4
Wisconsin	55,683[c]	65,109	85.5
Plains	212,683	256,364	83.0
Iowa	40,000[f]	45,492	87.9
Kansas	30,604[c][g]	35,472	86.3
Minnesota	52,500	58,211	90.2
Missouri	50,200	70,763	70.9
Nebraska	19,590	23,088	84.8
North Dakota .	9,421	11,219	84.0
South Dakota .	10,368	12,119	85.6
Southwest	189,398	245,350	71.4[h]
Arizona	18,877	27,954	67.5
New Mexico ...	14,146	N.A.	...
Oklahoma	34,580	48,400	71.4
Texas	121,795	168,996	72.1
Rocky Mountains .	69,957	85,510	81.8
Colorado	27,555	32,723	84.2
Idaho	11,098	13,896	79.9
Montana	10,000[i]	13,085	76.4
Utah	16,132	19,292	83.6
Wyoming	5,172	6,514	79.4
Far West	323,807	368,179	87.9
California ...	245,000	275,000	89.1
Nevada	4,620	5,700	81.1
Oregon	28,387	34,011	83.5
Washington ...	45,800	53,468	85.7
Alaska	2,419	3,330	72.6
Hawaii	8,988	10,633	84.5

Sources:

National Education Association, Research Division. Estimates of School Statistics, 1966-67. Research Report 1966-R20. Washington, D.C.: the Association, 1966. p. 25.

Hobson, Carol Joy, and Schloss, Samuel. Fall 1962 Statistics on Enrollment, Teachers, and Schoolhousing in Full-Time Public Elementary and Secondary Day Schools. U.S. Department of Health, Education, and Welfare, Office of Education, Circular No. 703. Washington, D.C.: Government Printing Office, 1963. p. 17.

a/ Includes estimates for nonreporting states (Pennsylvania and New Mexico).

b/ Excludes pupils attending publicly supported private academies and out-of-state schools.

c/ Excludes vocational schools not operated as part of the regular school system.

d/ Excludes Pennsylvania.

e/ Includes graduates from vocational high schools, Capitol Page School, etc.

f/ Estimated by NEA Research Division.

g/ Revised from original figures.

h/ Excludes New Mexico.

i/ Estimated by NEA Research Division and confirmed by Montana Education Association.

N.A. = Not available.

Figures for the 1962-63 academic year in the Dallas Independent School District (32) indicated that the dropout rate for the Negro senior high school was more than twice that of the white senior high school (14.4 and 6.8 percent). The white junior high school had a dropout rate of 3.0 percent, while its Negro counterpart lost 12.3 percent of its students during the same time period.

Attributing the differences to family background, Young (144) found that while Spanish-Americans comprised 30 percent of the Tucson, Arizona, population, they accounted for 93 percent of the school dropouts.

A study by the U. S. Department of Agriculture (31:3) reported the following dropout rates for 16- and 17-year-olds: all native-born whites, 15 percent; all foreign-born whites, 19 percent; Negro, 24 percent; Indian, 29 percent; Japanese and Chinese, 5 percent; other, 16 percent. Explaining the differences among groups of nonwhites, the report concluded:

> Compared with Negroes and Indians, Japanese and Chinese were more often urban residents, had substantially higher levels of adult educational attainment, a much higher proportion of employed males in white-collar jobs, and substantially higher incomes.... Since white-Oriental socioeconomic differences are minor, they apparently do not account for differences in dropout rates between Japanese and Chinese and whites 16-24 years old. (31:2)

This study also found differences between Negroes and whites by place of residence. Most school dropouts had completed at least nine years of school. But "only about 1 in 4 Negro male dropouts who were farm residents in 1960 had completed as much as 1 year of high school, compared with about 68 percent of white males living in urban fringe areas." (31:iii).

Duncan (39:92-96), in her extensive study of attainment, found that men whose fathers were British or Central or East European by birth completed about a year more schooling than men whose fathers were native or of other foreign origin. When other family background factors were taken into account, however, the positive effects of British origin were lessened and those of Central and Eastern European strengthened. The negative effects of other foreign origins either disappeared or became slight positive effects. Duncan added that 1 to 2 percent of variance in attainment within the total white cohort was explained by ethnic classification, while among nonwhite cohorts, 2.1 percent of variance in attainment was explained by this variable.

Types of Research on the School Dropout

Many kinds of research studies have been made, on the assumption that the number of dropouts could be reduced if we once learned why boys and girls withdraw before high-school graduation. Methods of study are almost as numerous as the studies themselves. Researchers report contradictory results of investigation of the same factor. While some disagreement may result from the difference in populations studied (e.g., rural vs. urban dropouts), many contrasting conclusions may be attributed to the design and conduct of the study.

Schreiber, Kaplan, and Strom (112) believe the most valuable way to view dropout studies is in terms of their purpose. The discussion below follows their general outline.

1. How many pupils drop out of school? The various methods of determining the number of dropouts have been discussed above. While useful in assessing the magnitude of the problem, this "keeping track" approach does not give a clue about why pupils drop out of school, nor does it aid greatly in initiating preventive or corrective action.

2. What are the reasons for dropping out of school? Data from several sources are used to find "reasons" for dropping out. While the most obvious of these is the pupil himself, the dropout may not recognize the reason or may tend to give the most socially acceptable answer. He may be forced to check one item from a list, when his reasons are multiple or not among the possibilities. One choice may mean different things to different pupils. For example, financial necessity may mean helping to support his family, or buying a car. Marriage may be a cause or a result of withdrawal. If dropouts are allowed open-ended responses, interviewers may still categorize their responses for purposes of reporting. Teachers, counselors, or other school officials may not know the reason, or may simply refer to school records to find what reason was given by the dropout when he left school.

3. Who are the dropouts and what are they like? These are descriptive studies. Characteristics investigated may be intelligence, parents' education, or size of school attended. Results are usually reported in statistical form.

Methods of obtaining data for these descriptive studies differ. School records are commonly used, but often are inaccurate or incomplete. Personal interviews, while lending themselves more to "in depth" investigations and understanding of school dropouts, their characteristics and causes, may be subjective; analysis is difficult, and data which are

TABLE 4.--SELECTED STUDIES ON SEX OF DROPOUTS

Study	Percent of dropouts	
	Boys	Girls
1	2	3
Blesdoe (10)[a/]	59%	41%
Young (144)[b/]	39	61
Indiana (40:5)	55	45
Kirkhus (68:7)	59	41
Dillon (36:23)	54	46
Van Dyke and Hoyt (133:7)	51	49

a/ Numbers in parentheses refer to items in the list of references.
b/ Summer dropouts only.

recorded may reflect the bias of the interviewer. Questions selected for inclusion on questionnaires again may reflect bias. Open-ended questions allow the dropout to express himself more completely and perhaps more accurately, but make results difficult to categorize for purposes of analysis.

In addition, because many dropouts move and leave no forwarding address, will not submit to interviews, or fail to return questionnaires, interviews and questionnaires may result in data from a selective rather than a representative sample.

In these studies, comparisons are often made between dropouts and control groups of graduates matched on one or more variables (e.g., age, IQ, or socioeconomic status).

4. Which pupils will drop out? This next step is a predictive approach. A number of characteristics tentatively assumed to be associated with dropouts, but differentiating them from graduates, are applied to a given population. Some of the most recent studies have attempted to improve prediction scales, so that they will predict all dropouts and eliminate all persisters.

5. What happens to dropouts? These follow-up studies seek answers to such questions as the success of marriages, employment status, and earning power of dropouts. Results are often used as a means of persuading youngsters to remain in high school through graduation.

6. What ways and means can be developed to reduce dropout rates? Such studies usually report programs which have been developed to "combat the school dropout problem." Some are merely campaigns to persuade dropouts to return to school, or to show potential dropouts why they should remain in school; results may be reported in numbers of former dropouts who returned, or in a decrease in withdrawal rate. Others are experimental programs, often including control groups, which attempt to relieve problems or to modify factors believed to be associated with early school withdrawal.

Why Do Pupils Drop Out of School?

What Dropouts Say

The reasons dropouts give most frequently for their withdrawal appear to be the desire to work and earn some money, and dissatisfaction with school.

Of nearly 5,000 dropouts questioned in one study (95), over one-third (34 percent) gave as their main reason for dropping out that they were more interested in work than in school, 23 percent were needed at home, and 13 percent needed to earn some money. Other reasons given, in order of descending frequency, were: too many poor grades, urged to quit by parents, trouble with teachers, and could get better training on-the-job.

Patterson (90) also found desire to work the most frequently given reason (39 percent). Other frequently given reasons were: family needed financial help (21 percent), disliked school (30 percent), dissatisfied with school curriculum (16 percent), and discouraged by low marks or failure (11 percent).

Of the 957 dropouts interviewed by Dillon (36:50), 36 percent said they preferred work to school, while 15 percent reported they needed money, and 11 percent said they were not interested in school.

Some studies (58; 77) indicated that reasons given by dropouts at the time of their withdrawal, and at a later time, may differ.

What Potential Dropouts Say

Matika and Sheerer (81) reported a study of seven potential dropouts, who agreed that pupils might quit school because "kids with reputations don't have a chance to make good," "teachers make it rough on kids by holding things against you, making fun of you, and picking favorites." While the sample was too small to draw conclusions, it is interesting to note the difference in reasons given by potential and actual dropouts.

What Interviewers Say

When responses were categorized by interviewers, the results were slightly different.

Havighurst, and others (54:60) reported reasons in broad categories. Of the 138 dropouts questioned in their study, nearly half (47 percent) gave answers classified as negative school experiences or negative attitudes toward school. Poor social adjustment was assigned to 18 percent of dropouts, and 16 percent preferred or needed work.

Differences in Reasons Given by School and Dropouts

Two studies, although with small numbers, illustrate the differences between reasons given by the school and those given by dropouts.

In one study of 20 dropouts (40:36), the school said 12 had left because of lack of interest in school, while only six dropouts gave this reason. Eight dropouts said they had quit to get married, but the school assigned this reason to only two. Two dropouts said they had quit over a conflict with a teacher, while the school did not list this reason.

Cook's study of 43 dropouts (27) showed that dropouts tended to give going to work as the reason for their dropping out (40 percent), while their counselors did not list work. Counselors reported that over half (52 percent) left for school-related reasons (mostly failure and retardation), while only one-third of the dropouts gave school-related reasons (mostly dislike of school).

Williams (140) reported a study in Tennessee which asked persons in different categories to rank causes for withdrawal. There was much agreement among teachers, principals, attendance teachers, and laymen, and their rankings differed greatly from those of pupils and those of parents.

Reasons by Sex

The U. S. Department of Labor study (130:3) reported responses by sex, and found that both boys and girls most frequently gave the reason of adverse school experience (38 and 32 percent), while work ranked second for boys (25 percent), and marriage second for girls (27 percent).

Reasons by Intelligence Level

The U. S. Department of Labor (130) also gave reasons by IQ levels, and found some differences. Table 6 gives the results. It shows that dropouts of average or above average IQ more frequently dropped out to work or to get married, while those of below average IQ had had adverse school experiences.

French and Cardon (45:17) gave reasons of students with high IQ, and found the most frequent reason for both boys and unmarried girls was dislike of school (19.6 and 20.0 percent), followed by the desire to work (16.7 and 16.0 percent).

TABLE 5.--SELECTED STUDIES ON AGE AT TIME OF SCHOOL WITHDRAWL

Study	Age at time of withdrawal							Mean age at time of withdrawal
	Under 14	14	15	16	17	18	19 and over	
1	2	3	4	5	6	7	8	9
Van Dyke and Hoyt (133:55-56)[a]			20%	33%	22%			16.58
Boys								16.75
Girls								16.50
Cook (27)				55				
Seven communities (130:12)								
Total	1%	2%	8	34	27	16%	12%	16.88
Boys	1	2	6	32	28	18	13	
Girls	[b]	2	10	38	26	15	9	
Snepp (114)			8	58	22	7	4	
Dillon (36:27)		1	9	54	26	10[c]		16.38

NOTE: Blank spaces indicate information not available.
a/ Numbers in parentheses refer to items in the list of references.
b/ Less than 1/2 of 1 percent.
c/ 18 and over.

Factors Associated with Early School Withdrawal

The trend in research seems to be to term what were first considered "reasons" for dropping out as "factors associated with dropping out." Instead of one simple cause, there seems to be a cluster of factors associated with dropping out. What may be the major reason for one child's withdrawal may be only incidental to another. The reported "reason" may be only the last of a long list of precipitating causes.

It is difficult to group factors associated with early school withdrawal into neat, mutually exclusive classifications. Though usually studied separately, factors are so interrelated (e.g., parents' education and family income; feelings of not belonging and nonparticipation in school activities) that categorization may be artificial and meaningless. However, because of the mass of research data, some sort of classification is necessary.

Discussed previously was the influence of the investigator's academic background on data sought and the interpretation of results. Thus, we might cite characteristics under the general headings: (a) the schools view the dropout (emphasis on such factors as lack of intelligence, interest, or persistence); (b) the social scientist views the dropout (emphasis on the family and community environment); (c) the behavioral scientist views the dropout (emphasis on personality factors). While investigators so classified may not consider these factors the only characteristics associated with school withdrawal, their inclinations are reflected in their writing.

For example, a psychiatric social worker observed from his clinical experience that many children become dropouts because of their inability or unwillingness "to test their learning abilities." Needing to preserve his self-concept of adequacy, but unable to master "feelings of defeatism," the child overcompensates by withdrawing from the educational environment (83:343). In a later article, this same writer stated:

> While he does not know it, his unresponsiveness or anti-learning behavior, is, in part, external dramatization of powerful instinctual urges, unhampered by self-regulating experiences. (82:261)

A counseling agency which specializes in the treatment of emotional and educational problems of adolescents studied 105 intellectually capable pupils who were referred to them as potential dropouts and concluded:

> ...for the greater number of our students difficulty in school was not a simple problem. It was not a matter of laziness, poor study habits, inadequate parental control, faulty teacher discipline, poor school curricula, or even a specific neurosis like learning impotence. Rather, the problems were entrenched in the entire character formation and were related to the total personality development. (73:73)

An education-oriented researcher stated:

> Whatever official records and studies report, most dropouts quit school because it has been meaningless to them--they have never got hold of it, they have let it pass them by, they do not believe...what it says it will do for them. (109:155)

Mannino (79), in contrast, places emphasis on social factors. He believes that the child's social groups, and particularly his family, exert the primary forces which influenced school persistence or withdrawal.

While the complexity and interrelationship among factors is recognized, for purposes of clarity, factors associated with early school withdrawal will be viewed in this paper as (a) factors unique to the individual, (b) factors related to the school, (c) factors related to the family, and (d) factors related to the community.

TABLE 6.--REASONS FOR SCHOOL WITHDRAWAL BY IQ LEVEL

Reason for withdrawal	Total	IQ level: Under 85	85-89	90-109	110 and over
1	2	3	4	5	6
Adverse school experiences ..	46%	55%	50%	39%	39%
Work	19	16	18	21	22
Marriage	14	7	12	19	22
Adverse home circumstances.	10	12	7	10	8
Number	840	289	117	383	51

Source:
U.S. Department of Labor, Bureau of Labor Statistics. School and Early Employment Experience of Youth: A Report on Seven Communities, 1952-1957. Bulletin No. 1277. Washington, D.C.: Government Printing Office, August 1960. p. 68.

Factors Unique to the Individual

Intelligence--A popular and enduring assumption is that school dropouts have low mental ability, usually lower than school persisters. Studies by Stevens (117), Doolittle (38), Van Dyke and Hoyt (133), Snepp (114), Cook (28), and Bowman and Matthews (14), among others, have confirmed this belief. Blough (11:34) compiled results of 14 studies and found the median IQ score of dropouts to be 94, while that of graduates was 105. The U. S. Department of Labor (130:64) reporting on seven communities, found that 21 percent of graduates, but 46 percent of dropouts, had IQ scores lower than 90. Only 6 percent of dropouts, but 16 percent of graduates, had IQ scores of 110 and over. Results of this study are detailed in Table 7.

Snepp (114) reported that of 174 dropouts, 34 percent scored an IQ of 96 or above, while 66 percent were below 96, and 23 percent were below 81.

Stice (118) reported on 9,500 high-school students who as sophomores had taken a test of academic aptitude. Ninety-one percent, 80 percent, and 69 percent, respectively, graduated from the most able, middle, and least able thirds.

Bowman and Matthews (14:22) reported dropouts and stayins by intelligence quartiles. They found that three-fourths of dropouts, but only 37 percent of stayins, fell in the lower half of the distribution.

Green (47), who reported the basic data for Van Dyke and Hoyt's study (133), noted that while male dropouts could be differentiated from male persisters on the basis of intellectual factors alone, females could be better differentiated when other nonscholastic measures studied were added to the regression equation.

Warner (137:21) summarized nine surveys of over 21,000 dropouts, and compared the percent of dropouts with the percent of the total population at certain IQ levels. His figures are shown below:

IQ level	Percent of population	Percent of dropouts
110 and above	30.7%	11%
90-109	46.5	50
80-89	14.5	20
Below 80	8.2	19

These figures show that collectively, dropouts, more frequently than the general population, come from lower intelligence groups. These same figures obscure data from each of the nine studies, which vary widely. For example, the percent of dropouts with IQ's of 110 and over ranged from 5 percent in one study to 32 percent in another. The range in percent of dropouts with IQ's below 80 was from 2 to 28 percent.

Though fewer in number, several studies have reported finding no significant differences between dropouts and stayins on intelligence. Boggan (13) found little difference. Hopkins (59) found general mental ability not important in identifying potential dropouts among the white students he studied. A recent study in Illinois (2) found that for the past three years, the median IQ of dropouts was 105.

Voss, Wendling, and Elliott (134:367) pointed out a difficulty in comparing results of studies. The suggested that "students with limited ability generally leave school early," while "capable students tend to remain in school longer." A study by Kirkhus (68:11) seems to substantiate this belief. He found the median IQ for those who left in the ninth grade to be 91; in grades 10 and 11, 98; and in grade 12, 105. A study in New York (132) found a median IQ of 84 for those dropping out during junior high school, and 96 for those leaving during senior high school. The median IQ of those leaving at the various age levels rose from 75 for those leaving in the seventh grade to 100 for those leaving in the twelfth grade.

In their more general study, Bowman and Matthews (14:87) considered this question. While the sample was small and the differences not statistically significant, the early dropout males (under age 16) tended to have lower ability scores. The reverse was true for females.

Figures on IQ scores reveal something frequently mentioned by writers on this subject. For example, while 75 percent of dropouts in the Bowman and Matthews study (14:22) scored in the lower two quartiles on intelligence, 23 percent scored in the upper half of the distribution. Conversely, 37 percent of graduates scored in the lower half of the distribution.

It must be concluded that the range of IQ scores for dropouts is great, both within and among studies. Some dropouts have high measured intelligence; some graduates have low measured intelligence. In most studies dropouts had lower average intelligence than graduates; in some, there were apparently no differences. In no study reported, however, did dropouts average higher intelligence than graduates.

Some researchers have studied segments of the dropout population, according to degree of measured intelligence. Van Dyke and Hoyt (133:34-38), for example, studied 21 dropouts who had measured IQ's of 120 or above and 21 persisters matched on IQ, sex, and size of

TABLE 7.--PERCENT DISTRIBUTIONS OF IQ'S OF GRADUATES AND DROPOUTS, BY SEX

IQ range	Male		Female		Total	
	Dropouts	Graduates	Dropouts	Graduates	Dropouts	Graduates
1	2	3	4	5	6	7
Under 85	32%	12%	28%	8%	31%	10%
85-89	15	11	15	11	15	11
90-109	47	62	50	64	48	63
110-114	4	8	5	9	4	9
115 and over ..	2	7	2	8	2	7
Number	2,225	3,201	1,807	3,960	4,032	7,161

Source:
U.S. Department of Labor, Bureau of Labor Statistics. School and Early Employment Experience of Youth: A Report on Seven Communities. Bulletin No. 1277. Washington, D.C.: Government Printing Office, August 1960. p. 64.

school attended. They found that these intellectually talented dropouts had significantly lower grade point averages, more absences, and less participation in extracurricular activities. The two groups were not significantly different on composite scores on subtests of an achievement test or on occupational status of fathers.

French and Cardon (45) made an extensive study of Employment Status and Characteristics of High School Dropouts of High Ability. Results of their study are reported in appropriate sections of this summary.

Personality and temperament--Many people believe that there are differences in personality and temperament between high-school dropouts and graduates. Several methods are used to assess the personality of students, and several types of information have been sought. Self-report questionnaires asking students to describe themselves are most frequent. Counselors' data, and teachers' and principals' opinions are also used.

Lichter and others (73:72-73) studied 105 intellectually capable, potential dropouts. They reported that 64 percent of the girls and 89 percent of the boys in their study were having problems because of their character formation. The remaining subjects were diagnosed as neurotic.

French and Cardon (45), on the other hand, concluded that "when looking at the overall response pattern of the male dropout (of IQ 110 and over), it becomes quite apparent that he falls well within normal limits with regard to his mental health....He is, from all indications, a fairly sound individual." (45:90)

In the French and Cardon study (45:103-104), there were some slight differences between high ability dropouts and persisters matched on IQ, grade level, and neighborhood. Male dropouts tended to be more uninhibited, assertive, rebellious, and independent than male persisters. Unmarried female dropouts were similar to their male counterparts. Female dropouts who had married tended to be less socially oriented, less prone to seek social recognition, more shy and retiring, and more inclined to work alone than female persisters.

Muirhead (86) reported that dropouts exhibited personality disorders to a far greater extent than did graduates.

Chilman (25) reported that potential dropouts had significantly lower need scores in the areas of achievement, order, and cautious-controlled behavior than did a group of potential persisters matched on IQ, sex, grade placement, and school attended.

Two studies (5; 42) found no significant differences between dropouts and persisters on patterns of self-concept.

Walton (136) found that nervous manifestations were the one aspect of mental health that differentiated male and female dropouts from male and female persisters, when studied together and when grouped by race and ethnic origin.

Table 8 summarizes selected studies in this area.

Health--Poor health is often supposed to be one of the main causes of school withdrawal. It may include anything from an authentic, disabling illness to pregnancy. Blough (11:47) suggested that many girls give poor health as the cause of their withdrawal because it may be more socially acceptable than the real cause. Few articles reported that health of dropouts had been thoroughly investigated.

A study in New York (132) reported that 17 percent of dropouts, compared with 6 percent of graduates, could be described as in fair or poor health.

The U. S. Department of Labor (130:22) reported that 5 percent of dropouts, according to school records, and 6 percent, according to dropouts themselves, withdrew for this reason, with girls giving it as a reason slightly more often than boys.

Interests--Young (144) reported some distinct patterns of occupational interests for school dropouts. Higher frequencies were found in the so-called manipulative occupations (mechanical, artistic, and clerical) and lower frequencies in cogitative occupations (scientific, literary, and persuasive).

Factors Related to School

Grade level at time of withdrawal--Results of studies of this factor have been inconclusive. In addition, results are not completely comparable, because investigators begin counting dropouts at different grade levels (e.g., some count dropouts in grades 9-12, while some, grades 10-12).

Some studies have reported grade 9 as the most frequent time of withdrawal (45; 122), some, grade 10 (68; 130; 132), and some grade 11 (40). The NEA study of holding power (106) reported that similar percentages of withdrawals occur at grades 10 and 11 (43 and 42 percent).

Van Dyke and Hoyt (133:55-57) found that the greatest number of girls withdrew during the eleventh grade, and the greatest number of boys during the ninth grade. Sixty percent of the girls dropped out in grades 10 or 11, and 69 percent of boys withdrew in grades 9 or 10. The average grade at dropping out for the entire group was 10-8, while for boys it was 10-7 and for girls, 10-9.

French and Cardon (45:13) went a step further. They compared dropouts with IQ's of 110 and over with dropouts of all intellectual levels.

Grade at dropping out	Percent of all dropouts	Percent of high ability dropouts	
		Male	Female
9	15.1%	3.7%	3.8%
10	37.0	22.6	20.2
11	29.5	39.6	40.5
12	18.4	34.2	35.5

In this study, while girls still tended to stay in school longer, high IQ dropouts of both sexes stayed in school much longer than dropouts of all intellectual levels.

Reading achievement--Most studies have shown that the reading achievement of dropouts is significantly lower than that of graduates. Blesdoe (10), for example, found that the mean reading comprehension score for pupils dropping out of the ninth or tenth grades was 7.9, while that of the remaining ninth-graders was 8.9. Lanier (71) reported that the mean grade level reading score for dropouts was 7.7, while for persisters it was 8.9. Stevens (117) also found significant differences.

Snepp (114) found that of 159 dropouts only 30 percent were reading at or above the appropriate grade level, while 22 percent were retarded one year, 26 percent, two years, and 21 percent, three or more years. In an earlier study (115), Snepp found that only one-fourth of the dropouts were reading normally while 28 percent were retarded one grade, 19 percent, two grades, and 28 percent, three grades.

Young (144:90) reported that of 54 dropouts tested one month before ninth-grade graduation, 24 were reading below the seventh-grade level, and only four were reading up to grade standard.

Kirkhus (68:12) found that on the basis of reading achievement test scores in the eighth grade, 20 percent of the dropouts were above average; 17 percent, average; and 64 percent, below average readers.

On the other hand, a study in Cook County, Illinois, suggested that reading ability may not be as greatly associated with withdrawal as might be expected. A summary of this study (2) reported that of more than 100 handicapped readers, 60 percent graduated from high school. Only 20 percent of dropouts were considered handicapped readers. Hopkins (59) also found reading ability not indicative of identifying dropouts.

The most extensive research of the relationship between reading ability or achievement and school persistence was done by Penty (91). She studied 593 tenth-graders who scored in the lowest quartile for their class at the time of their last reading test, and an equal number who scored in the highest quartile. Among poorest readers, almost half (49.9 percent) dropped out, while among best readers, only 14.5 percent dropped out. Penty then compared 154 dropouts and 138 graduates among poorest readers, for whom she had scores from the same standardized reading test, and found no significant differences between the mean grade reading level scores (91:24). She did find, however, that poor reader dropouts had a mean IQ of 83.6, while poor reader graduates had a mean IQ of 88.2, a difference significant at the 1-percent level of confidence (91:24-25). When she compared reading age with mental age, Penty concluded that 96 percent of 276 poorest reader dropouts had potential from growth in reading ability, ranging from three months to over eight years. Graduates and dropouts showed equally high potential for reading growth.

From interviews with a sample of 60 poor reader dropouts and 60 poor reader graduates, she concluded that the dropouts' acceptance of self was more damaged by their reading difficulties than was the graduates'. Three-fourths of the dropouts interviewed, compared with 38 percent of the graduates, expressed feelings of inferiority, shame in class, disgust with self, and a desire to leave school because of their handicap (91:56). A desire to learn to read better was expressed by 40 percent of graduates and 27 percent of dropouts (91:36). It appeared that among the poor readers interviewed, dropouts had more negative attitudes toward themselves and their difficulties than did graduates.

Nonpromotion--Grade failure, or nonpromotion, appears to be greatly associated with dropping

TABLE 8.--SELECTED STUDIES ON PERSONALITY

Study	Location	Subjects	Controls	Aspects measured
1	2	3	4	5
French and Cardon (45) 1966	Pennsylvania	125 male dropouts IQ 110 or above	125 male persisters, matched on IQ, grade level, and neighborhood	14 factors of independent dimensions of personality
Walton (136) 1965	Waco, Texas	165 dropouts who had been in 8th and 10th grades in fall 1962 and had dropped out by June 1964	2,391 persisters still in school 2 years later (June 1964)	13 characteristics of mental health: (1) close personal relationships, (2) interpersonal skills, (3) social participation, (4) satisfying work and recreation, (5) adequate outlook and goals, (6) behavioral immaturity (7) emotional stability, (8) feelings of inadequacy, (9) concern for physical defects (10) nervous manifestations, (11) total assets, (12) total liabilities, and (13) total mental health characteristics
Chilman (25) 1960	County in New York	52 potential dropouts in 9th and 10th grades (39 boys, 13 girls) IQ 90 or above	39 boys and 13 girls potential persisters matched on IQ, sex, grade placement, and school attended	Self-perceived problems
Knudsen (69) 1965	Greensboro, North Carolina	2,989 white students in grades 7-12: (1) persisters who had repeated no grade, (2) persisters who had repeated grades, and (3) dropouts		
Fifield (42) 1964	Spokane, Washington	Group 1. Dropouts of 8th grade Total of Groups 1, 2, and 3 = 2,387	Group 2. Stayins matched on IQ, sex, and socioeconomic level Group 3. Randomly selected stayins	Aspects of self-concept: (1) self-appraised, (2) self-ideal, (3) absolute difference between scores on 1 and 2, and (4) congruence index
Cook (27) 1956	Atlanta, Georgia	95 dropouts	200 persisters	Home adjustment
		95 dropouts	200 persisters	My school
				My home and family
				Health
Bowman and Matthews (14:31-32) 1960	Quincy, Illinois	90 dropouts	94 persisters matched on intelligence and/or socioeconomic status	Social and personal adjustment
Bowman and Matthews (14:32-33)		55 dropouts	112 controls matched on sex and either socioeconomic status or intelligence or both	Sociability, socialization, responsibility, self-acceptance, tolerance, self-control, and others
Bowman and Matthews (14:34-35)		45 dropouts	105 persisters matched as above	Maturity of approach to developmental tasks of: (1) achieving autonomy, (2) learning one's sex role, (3) accepting oneself, and (4) accepting others

AND TEMPERAMENT SCHOOL DROPOUTS

Instrument	Results	Remarks
6	7	8
High School Personality Questionnaire--142 multiple choice items--self-rating--administered about one year after withdrawal	Dropouts were significantly more uninhibited and happy-go-lucky, assertive, independent, unconventional, rebellious, from permissive, less protective homes	Investigators concluded that the conforming nature of the school setting might have created a stumbling block to persistence. Dropouts did not apparently reject learning.
California Mental Health Analysis--given to 8th and 10th grade pupils	White male dropouts differed significantly on 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13; white females on 1, 2, 3, 4, 7, 10, 11, 12, and 13; Mexican-American males on 7 and 10; Mexican-American females on 10; Negro males on 1 and 13; Negro females on 1, 4, 10, 11 and 13; all males on all <u>except</u> 2; and all females on 1-13	Significant at .05 level of confidence. t-test used. Investigators concluded that mental health characteristic of nervous manifestations would most consistently identify potential dropouts.
SRA Youth Inventory Activities Index	Total potential dropouts had <u>more</u> problems in areas of after-school plans, boy-girl relationships, things in general, home and family, health, and <u>lower</u> need scores on achievement, order, cautious-controlled behavior, pragmatism, understanding Male potential dropouts had <u>more</u> problems in health, concerns about self, things in general, need for rejection and <u>lower</u> need scores on achievement, affiliation, order, pragmatism, cautious-controlled behavior, responsive, self-sufficient behavior No significant differences between female potential dropouts and potential persisters	For purposes of study, students exhibiting 3 or 4 of the following characteristics were classified as potential dropouts; those exhibiting 2 or fewer, potential persisters: grades averaging below C in preceding academic year, nonparticipation in school activities, one or more years' grade retardation, 20 or more days' absence in preceding year.
Questionnaire	Dropouts, retained persisters, and non-retained persisters rated lowest to highest on: self-perceived status, peer relations, and attitudes toward school	
Based on Osgood's concept of verbal opposites in semantic space	No significant differences were found for the measured aspects of self-concept between the dropouts and either stayin group	Investigator concluded that the relationships did suggest that higher self-appraised, self-ideal, and congruence index scores were associated with stayins, while a larger discrepancy between appraised and ideal self was associated with dropouts.
Bell Adjustment Inventory	Mean test score of persisters 3.00 points higher than mean test score of dropouts	
SRA Youth Inventory	Mean score of persisters 2.77 points higher Mean score of persisters 4.83 points higher Mean score of persisters 1.78 points higher	
California Test of Personality administered when students were in 6th grade	Controls had scores in most favorable quartile more than 3 times as often as dropouts Controls somewhate less likely to have scores in lowest quartile	
California Psychological Inventory administered in spring of 10th grade	Both dropouts and controls had below average scores; persisters had twice as many scores in most favorable quartile and 2/3 as many scores in least favorable quartile One-half of the dropouts scored in the least favorable quartile	
Sentence completion test	Only significant difference was on accepting others (on 1-5 scale, 1 being best, dropouts' mean score 3.38, persisters' mean score 2.62) Dropouts scored less favorably on other 3 tests, but not significantly	Significant at .01 level of confidence.

TABLE 9.--SCHOOL RETARDATION OF DROPOUTS, MATCHED GRADUATES, AND ALL GRADUATES

Retardation	Dropout N=138			Controls N=127a/			All stayins N=294		
	Number of boys	Number of girls	Total in percent	Number of boys	Number of girls	Total in percent	Number of boys	Number of girls	Total in percent
1	2	3	4	5	6	7	8	9	10
Retarded one year	26	7	23.9%	7	3	7.9%	19	12	10.5%
Retarded two years ...	4	3	5.1	0	0	0	0	0	0
Total number of students retarded	30	10	29.0	7	3	7.9	19	12	10.5
Total number of years retarded	...	...	47	...	...	10	...	...	31
Retardation rate for group	...	...	34.1	...	...	7.9	...	...	10.5

Source:
Bowman, Paul H., and Matthews, Charles V. Motivations of Youth for Leaving School. U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 200. Quincy, Ill.: University of Chicago and Quincy Youth Development Project, September 1960. p. 37.
a/ Controls were graduates matched with dropouts on IQ and/or Index of Status Characteristics.

out of school. Stevens (117) found significant differences between graduates and dropouts on this factor. Walsh (135) found that approximately 7 percent of those who had not repeated an elementary grade dropped out, while 27 percent of those who had repeated an elementary grade dropped out. Nearly one-fourth of the dropouts in his study had failed at least one grade.

Dillon (36:36) found that 52 percent of dropouts had failed one or more grades. Thomas and Knudsen (126) reported even higher figures for studies in Dade County, Florida (74 percent of the dropouts, compared with 17.8 percent of the graduates, had failed at least once), and Louisiana (72 percent of the dropouts had repeated at least one grade).

Bowman and Matthews (14) compared retardation among dropouts, graduates matched on IQ and socioeconomic status, and all stayins. Table 9 shows the results. The retardation rate for dropouts was over four times that of the control group, and over three times that of the stayin group. Bowman and Matthews also reported that 60 percent of the retardation in all groups occurred in the first and second grades. Dropouts had a larger number of grade failures in the upper grades.

Overageness--Overageness, while generally related to nonpromotion, is sometimes isolated for study as a factor associated with dropping out.

Young (144:90) found that the average age of 54 ninth-grade summer dropouts was 16 years, 7 months, which was approximately two years older than the average age of junior high-school graduates. Van Dyke and Hoyt (133:55, 58-59) also found overageness characteristic of dropouts. In their study, 66 percent of pupils withdrawing in the ninth grade were overage, and 34 percent withdrawing in the twelfth grade were overage.

A study of seven communities (130:5, 17) revealed that 84 percent of the total dropouts were behind the normal grade for their age by one or more years, and 53 percent, by two or more years.

Extent of retardation	Dropouts			Graduates	
	Total	Male	Female	Male	Female
One or more years	84%	87%	80%	33%	20%
Two or more years	53	59	44	8	4

Kirkhus (68:8) reported that 40.5 percent of the dropouts in his study were two or more years above the normal age range, and 41 percent were one year above. Only 19.5 percent could be considered at the "normal" age range for their class.

Finally, Allen (1) analyzed overageness by sex and found that 4 percent of boy and 7 percent of girl dropouts were underage, while 53

percent of boy and 41 percent of girl dropouts were overage, when they entered ninth grade.

Subject failure--Most studies confirm the belief that failure in school subjects is characteristic of school dropouts. Dillon (36:37) found that of 881 dropouts, 74 percent had failed at least one subject, 13 percent had failed two subjects, 17 percent had failed three, and 30 percent, four or more. Williams (141) reported a Maryland study which revealed that 48 percent of the dropouts were failing three or more subjects during the semester they withdrew from school. A study of seven communities (130) revealed that four out of five boy dropouts and two out of three girl dropouts were failing at least one subject. Allen (1) found that half of boy and a third of girl dropouts had received failing marks in their first semester of high-school work.

Young (144), on the other hand, found that those who had dropped out of school during the summer after ninth-grade graduation had no record of failing grades.

Grades--Kirkhus (68:14) combined all semester grades of all dropouts and found that 0.8 percent were A's, 6.3 percent were B's, 19.5 percent were C's, 40 percent were D's, and 33.3 percent were F's.

Grade point averages--If dropouts fail many courses and get low grades in those they pass, it follows that they would have low grade point averages. Stevens (117) found this true. The Indiana Study Commission (40:5) found the following grade averages for dropouts: A, 0.6 percent; B, 5 percent; C, 22 percent; D, 41 percent; and F, 31.4 percent.

Allen (1) reported that of 847 dropouts, only 2 percent had grade point averages of A or B, while 74 percent had averages of D or E. Projecting dropouts' ranks in class on the basis of their over-all grades, Allen placed 2 percent in the high quarter, 5 percent in the third quarter, 15 percent in the second quarter, and 78 percent in the lowest quarter.

Van Dyke and Hoyt (133:24-25) found a mean grade point average of 1.5 for all dropouts and 2.5 for all persisters. The difference between averages of male dropouts and persisters and between female dropouts and persisters was not significant, but females in both groups were higher than males in their respective groups.

Walsh (135) concluded from his study that grade point averages represented the most significant difference between graduates and dropouts. In his study, 4 percent of graduates' grades placed them in the lowest quarter of their class, compared with 53 percent of the dropouts' grades.

Young (144), on the other hand, reported that as a group, non-returning ninth-grade graduates had a higher grade point average than the entire ninth-grade graduating class (2.93 compared with 2.1, with 5.0 being an A-average).

An Illinois study (2) pointed to the overlap between graduates' and dropouts' grades. In that study, 12 percent of elementary-school valedictorians and salutatorians did not graduate from high school, while 64 percent of elementary-school graduates with performance considerably below grade level graduated from high school.

Bowman and Matthews (14:40) found that dropouts made much lower grades than graduates matched on IQ and socieoconomic status. Grade point averages placed no dropouts in the highest quarter of the class and 69 percent in the lowest quarter, while corresponding percentages for matched graduates were 19 and 8 percent.

Hamreus (50) also matched dropouts and stayins on IQ, sex, and socioeconomic status, and found, as did Bowman and Matthews, that dropouts have lower grades.

With the exception of one study, then, it appears that research has found that a large number of dropouts have failed courses, many more than one, and that their over-all grades are lower than those of graduates.

Course of study--Most dropouts at all intellectual levels come from general or commercial courses of study, while fewest dropouts are enrolled in a college preparatory curriculum. For example, a study in Maryland (141) revealed that 46 percent of the dropouts were enrolled in "general" courses, and only 11 percent in an academic curriculum.

Looking at this question in another way, Doolittle (38) found the holding power of the college preparatory curriculum to be 94 percent, while that of the "general" curriculum (shop and home economics) was 52 percent. Lower yet was the "basic trades" curriculum (machine shop, drafting, etc.), with a holding power of 42 percent.

French and Cardon (45) and Stice (118) compared curriculum enrollment of high-aptitude dropouts with that of all dropouts. Table 10 shows the results of the French and Cardon study.

Size of class--Blesdoe (10) analyzed the size of elementary-school classes in which dropouts had been enrolled. He found that in grades 1-3, the mean number of pupils in dropouts' classes was greater than the mean number in all classes; for grades 4-8, dropouts' classes averaged fewer pupils than all classes.

Size of school--Studies relating school size to dropout rates have yielded conflicting

TABLE 10.--CURRICULUM ENROLLMENT OF ALL STUDENTS, ALL DROPOUTS, AND HIGH-ABILITY DROPOUTS[a/]

Curriculum enrollment, grades 9-12	All students, 1959-60	All dropouts, 1962-63		High-ability dropouts--1964-65[b/]	
		Male	Female	Male	Female
1	2	3	4	5	6
College preparatory	38.3%	5.1%	5.7%	26.0%	28.3%
Commercial	25.1	6.9	37.4	7.4	50.8
Vocational	11.4	28.3	9.6	20.8	1.9
General	25.2	54.0	42.6	46.2	18.1
Other	...	5.6	4.7	1.2	0.8
Total number		9,825	7,118	597	829

Source:
French, Joseph L., and Cardon, Bartell W. Employment Status and Characteristics of High School Dropouts of High Ability. University Park: Pennsylvania State University, September 1966. p. 19.
a/ IQ of 110 and above.
b/ Figures for Philadelphia not included.

results. Table 11 summarizes selected studies. It appears that no definite relationship exists between school size and dropout rate.

In addition, the Van Dyke and Hoyt study (133) reported on each variable studied by size of school.

Type of school--The NEA survey of holding power in large cities (106:39) determined holding power by type of school. For all but one group of cities, holding power of vocational schools was lower than that of all high schools. Figures are given below:

Group	Population	Holding power rates: All high schools	Holding power rates: Vocational high schools
A	600,001 or more	66.8%	46.1%
B	300,001-600,000	72.8	53.5
C	200,001-300,000	73.7	78.2
D	90,001-200,000	76.3	63.0
Total	Over 90,000	70.8%	51.0%

Duncan (39:96-99) studied differences in amounts of schooling for males by type of school attended before the age of 16. She found that for the years 1920-1960, males who had had at least some training in parochial schools had a mean attainment of nearly a year more than the mean of those who had attended public schools exclusively. Those men who at some time had attended private schools had a mean attainment of two and one-half years above that of those who had attended only public schools. However, the positive effects of parochial- and private-school attendance were reduced when other family background factors were considered. Duncan found that type of school attended accounted for 3 percent of the variance in attainment, when other family background factors were taken into account. The proportions of explained variance were somewhat higher for nonwhites than for whites.

Type of school program--Van Dyke and Hoyt (133) and Cook (29) investigated the relationship of various school programs and practices to holding power.

Primary research for the Van Dyke and Hoyt study (133) in this area was done by Hayes (55). Seventy-three schools were rated on the following factors: program of studies, guidance program, extracurricular programs, teacher morale, pupil morale, physical plant, and holding power. Within each of four size groupings, schools in the upper third of their group on holding-power rates were compared with those in the lower third. In Group I schools (10-99 pupils) no significant relationships were found. For schools with 100-249 pupils (Group II) correlations for total rating (.49), extracurricular activities (.58), and teacher morale (.47) with holding power were positive and significant at the 5-percent level of confidence. Positive, but nonsignificant, relationships were also found between holding-power rates and guidance programs and pupil morale. Results for Group III schools (250-499 pupils) were similar to Group II, and in Group IV schools (500 or more pupils) there was a correlation of .62 between holding power and extracurricular programs. Hayes acknowledged that while the relationship of extracurricular activities to holding power was probably valid, the significant results on other factors were probably due to chance. He concluded that the "goodness" of a school, as rated on these criteria, may not be judged by its holding power. He questioned whether the school is the institution or force influencing holding power.

Cook (29) studied a different set of factors and found significant relationships between dropout rates and (a) failure by pupils in ninth and twelfth grades, (b) restriction of extracurricular activities by grades and by fees, (c) providing classes for retarded pupils and poor readers, (d) homogeneous grouping, (e) allowing pupils to work part of the school day, and (f) inservice education for teachers devoted to the investigation of failures and dropout problems within the school. Per-pupil expenditures did not significantly affect the dropout rate, while employment of guidance counselors who used recommended counseling techniques gave schools a lower dropout rate.

Absenteeism--Frequent absences seem to characterize school dropouts. Snepp (114) reported that 80 percent of the dropouts in his study had chronic attendance problems. Wilson (142) found that 74 percent of the dropouts and 15 percent of the graduates missed 16 or more days of school per year. Walsh (135) reported that more than one-third of the dropouts, and one-tenth of the graduates, were absent as many as

19 days during their last two semesters in school. Stevens (117) reported significant differences in absence records of dropouts and graduates. Sullivan (122) found that dropouts accounted for 84 percent of absences during their last year of attendance.

Van Dyke and Hoyt (133:40-41) found that dropouts were absent an average of 15 out of 180 days, compared with an average of 6 out of 180 for persisters. Differences between dropouts and persisters were greatest for those who withdrew during the ninth grade, and generally least for those who withdrew during the twelfth grade.

Dillon (36:33) found that attendance grew worse as the destined dropout proceeded from elementary school through junior high and senior high school.

Hamreus (50) found dropouts absent from the eighth grade more often than stayins matched on sex, IQ, and socioeconomic status.

Frequent transfers--Some writers have believed that frequent transfers, which upset the school routine and require pupils continually to adjust to new environments, characterize dropouts. Dillon (36:28) found that approximately two-thirds of the dropouts had three or more transfers, and 17 percent had five or more transfers during their school careers.

Blesdoe (10) reported that of the pupils enrolled continuously in the same elementary school, 9 percent dropped out, while of those enrolled in two or more elementary schools, 35 percent dropped out.

French and Cardon (45), in contrast, reported that while 29 percent of the male dropouts and 33 percent of female dropouts had transferred, male high-school graduates had transferred more often than, and female graduates as often as, their dropout counterparts.

Extracurricular activities--Nearly all studies investigating this factor reported nonparticipation in extracurricular school activities characteristic of the school dropout (13; 117).

Snepp (114) reported that 79 percent of the dropouts "avoided" extracurricular activities. Dillon (36:44) found that of 798 dropouts, 73 percent had never participated in an extracurricular school activity, one-fourth had participated in one or two, and only 2 percent in two or more.

Sullivan (122) reported that 52 percent of the boys and 43 percent of the girls had not participated in any outside-class activities. Dropouts in Van Dyke and Hoyt's study (133:42-45) averaged 1.6 fewer activities than graduates. The greatest difference in participation

TABLE 11.--SELECTED STUDIES OF SCHOOL SIZE AND DROPOUT RATE

Study	Location	School size--number of students	Dropout rate	Conclusions	Remarks
1	2	3	4	5	6
Van Dyke and Hoyt (133:10)	Iowa public high school grade 9-12	All schools (N=73) 1-99 100-249 250-499 500 and over	19.6% 13.5 12.7 17.8 24.9	Generally, the larger the school the greater the percentage of dropouts.	Because of wide variations in dropout rate among schools of same size group, differences more apparent than real.
University of State of New York (132:8)	89 New York school districts			Schools with enrollment of less than 100, or of 200 or more had higher dropout rate than those enrolling 100-200.	
Cook (29)				Large schools had significantly lower dropout rate than small schools.	
Hand (51)	Illinois	5 largest schools 5 smallest schools	Boys 3.3* Girls 2.2* Boys 3.2* Girls 2.5*	No apparent relationship.	*Dropouts per 10 graduates.

was between graduates and dropouts withdrawing in grades 11 and 12.

Bowman and Matthews (14:41-42) noted that although participation was less frequent among dropouts, the pattern of participation for both groups was about the same. Most popular for both groups were athletic events, followed by school dances.

Walsh (135) reported that 76 percent of 127 dropouts and 15 percent of 913 graduates participated in no extracurricular activities; 55 percent of graduates and 2 percent of dropouts participated in three or more.

Hamreus (50) matched dropouts and stayins on sex, IQ, and socioeconomic status, and found that dropouts participated in fewer school activities and clubs.

Dislike of school--Many researchers have studied the attitudes of dropouts toward school. Speer (116), for example, matched dropouts and graduates on socioeconomic status, occupation of parent, age, and measures of aptitude, and found significant attitudinal differences between the groups.

Bowman and Matthews (14:44) found that over three-fourths of matched graduates (77 percent), but less than one-third of the dropouts (29 percent) definitely liked school. Conversely, two-thirds of the dropouts and 12 percent of the graduates definitely disliked school.

A study by Cervantes (20) showed similar results; 62 percent of the dropouts said their school experiences were definitely unfavorable, while 76 percent of graduates said their experiences were definitely favorable. Graduates averaged 1.2 complaints about the school; dropouts, 3.3 complaints. On the other hand, graduates averaged 4.4 things they particularly liked about going to school; dropouts, 2.4. Specifically, 79 percent of the dropouts found fault in the areas of curriculum, staff, and school activities, while an equal percent of graduates expressed specific approval of things in these areas. Approximately 70 percent of the graduates complained about such things as being involved in too many activities. Three-fifths of dropouts liked either nothing at all about school, or something extracurricular. Handy (52) also found that dropouts were dissatisfied with school; they especially disliked the curriculum.

Pond (95) polled nearly 5,000 Pennsylvania secondary-school dropouts on the courses they had taken while in school. He asked them to rate school subjects on the basis of "most interesting," "of greatest good," and "of least good." He then asked them to rate the school on how well it succeeded in helping to meet what were judged to be pupil needs. Table 12 shows the results. It appears that these dropouts viewed the school as not assisting them in finding and holding a job, while to them the school did aid them in getting along with other people.

Often dislike of or inability to get along with his teacher(s) is given by a dropout as his reason for withdrawal from school. Of the 138 dropouts studied by Bowman and Matthews (14:45), 19 percent said they were unable to get along with their teachers, but 70 percent said they were able to get along with them. Corresponding percentages for graduates matched on IQ and/or socioeconomic status were 4 and 92. In this study, while a greater percent of dropouts than graduates had trouble with their teachers, the majority of dropouts apparently were able to get along with their teachers.

Behavior--One factor frequently thought to be characteristic of dropouts is delinquency and behavior problems in school. There have been several studies on this question, but results are inconclusive.

Hamilton (49) reported that dropouts tended to be well-behaved in school. Williams (141) reported that in one study 21 percent of the dropouts were considered by the counselor or principal to be behavior problems, and 24 percent had been suspended from school. The Indiana Education Study Commission (40:23) found that 67 percent of the dropouts could be considered occasional to frequent discipline problems, while Snepp (114) reported a much lower figure of 31 percent. Muirhead (86) reported that graduates had better citizenship marks than dropouts.

Lichter and others (73) investigated the time of onset of school problems of dropouts. They concluded that 65 percent of male dropouts and 29 percent of female dropouts had a history of "malfunctioning" since grade school (73:275). Of those boys, 79 percent were underachieving and 62 percent were misbehaving in the classroom, while 40 percent had problems in more than one area (73:60). Ninety-three percent of the total dropouts had problems in high school (73:61).

Other school-related factors--Boggan (13) included in his study of dropouts two items which are not usually studied. He found that pupils who lived within walking distance of the school graduated more frequently than those who rode the bus, and those who lived within the school district graduated more often than those who lived outside the district. He associated these factors with a resulting feeling of not belonging and nonparticipation in school activities, usually held after school.

Factors Related to the Family

Nearly all studies of the problem of early withdrawal from school have stressed the importance of family background; emphasis has

TABLE 12.--PUPIL RESPONSES TO QUESTION: "HOW MUCH DOES THE SCHOOL HELP YOU IN SUCCESSFUL LIVING?"

Pupil needs	Degree of help		
	Little	Some	Much
1	2	3	4
Getting along with other people	7%	31%	62%
Using good English	10	38	51
Practicing good health habits	11	39	50
Being active as a citizen	19	31	50
Keeping family life happy	21	37	42
Spending and saving money	24	37	39
Enjoying reading, art, and music	27	35	38
Using leisure time well	22	44	34
Understanding science	27	40	33
Getting and holding a job	30	40	30

Source:
Pond, Frederick L. "Pennsylvania Study of Dropouts and the Curriculum." Bulletin of the National Association of Secondary-School Principals 37: 81-87; March 1953.

been on the socioeconomic status of the family. Two extensive studies of the impact of social class on adolescence are Hollingshead's Elmtown's Youth (57) and Warner's Democracy in Jonesville (138). More recent studies in this area have been Growing Up in River City (54) and Family Factors and School Dropouts: 1920-1960 (39).

Birth order--Bowman and Matthews (14:30) studied the relationship of birth order to dropping out and concluded that dropouts, when compared with graduates matched on IQ and/or socioeconomic status, were less often only or first-born children (i.e., persisters were more often only or oldest children). Cook (27), on the other hand, found that youngest children were less likely to drop out. Cook also reported that children with older and younger siblings were more likely to drop out than those who were oldest or youngest children in their family. Duncan (39:215) reported that for white males from intact homes, the percentage not enrolled in school was typically higher for a boy who was the only child in the home than for the boy who shared the home with one other child.

Size of family--Stevens (117) reported a significant difference in the sizes of families of dropouts and graduates. Bowman and Matthews (14:30) found generally that dropouts more frequently came from families with five or more children (43 percent), while graduates matched on IQ and/or socioeconomic status more frequently came from families of four or fewer children.

Wilson (142) reported that among Negro dropouts studied, 75 percent of withdrawals came from families of five or more children, while 80 percent of graduates came from familes with one to four children. Hamilton (49) found that dropouts, more often than the total white high-school population, were from families of five or six or more children. Young (144:90) found that families of dropouts averaged six members, while the national average at that time was 3.5 members.

Dillon (36:20), on the other hand, concluded that the evidence pointed to no relationship between family size and dropping out.

Cervantes (20) found the average family size for both dropouts and graduates matched on, among other things, socioeconomic status, was four children. Boggan (13) also found size of family not significantly related to dropping out.

Duncan (39:59), approaching the question a bit differently, found that for males, a decrease of one in the number of siblings resulted in an increase of 0.24 school years completed, when family type, head's occupation score, and head's education were held constant. She noted

TABLE 13.--SELECTED STUDIES OF OCCUPATION OF PARENTS OF DROPOUTS

Study	Parents' occupation	Percent of dropouts
1	2	3
Bienstock (8)	Unskilled, service, or semiskilled	Nearly 50%
Young (144:90)	Common laborer	37.0
	Skilled	40.8
Allen (1)	Skilled, unskilled, or semiskilled	Boys 69
		Girls 75
		Total 72
Williams (141)	Unskilled	46
Van Dyke & Hoyt (133:85)	Unskilled laborer	23
	Professional	0.5
Walsh (135)	Professional-technical	3.9

that the effect of the number of siblings was a little less among nonwhites than among whites.

Occupation of parents--The occupation of parents of dropouts has frequently been studied singly as a factor associated with dropping out. Results of such studies have usually shown that the principal wage earner in the dropout's family ranked lower on the occupation scale than that of the persister's family (i.e., came from less skilled or unskilled occupations rather than professional-technical occupations). A summary of selected studies is given in Table 13.

Van Dyke and Hoyt concluded that the chances were 9 to 1 that the child of an unskilled laborer would drop out as compared with the child of a professional man (133:85). Using an adaptation of the Warner Scale to rate the occupational status of the father, with one the highest and seven the lowest, they found the mean occupational class of dropouts' fathers to be 5.25, and that of persisters' fathers, 4.21, a difference significant at the .001 level of confidence (133:50).

Blesdoe (10) expressed the frequency of occupation of dropouts' parents as a ratio of the frequency in the school population. With 1.00 indicating that the frequency observed equals the frequency expected, the results were as follows: professional and managerial, .09; agricultural, .65; homemaking, .92; sales, .39; clerical, .06; skilled labor, 1.02; unskilled labor, 2.64; miscellaneous (unemployed, retired, or unknown), 3.49.

Duncan (39:215) reported that by age 16 the enrolled son of a white-collar worker had completed an average of a half grade more schooling than the enrolled son of a nonfarm laborer or farm worker.

In contrast, Das (33) reported that in his study potential dropouts of either sex could not be differentiated from potential persisters in terms of father's occupation. Boggan (13) also found employment of parents not significant.

Walsh (135) reported that 18 percent of parents of dropouts were unemployed, compared with 3 percent of parents of graduates. Studies on the number of families of dropouts on welfare report figures ranging from 3.7 percent to 33.3 percent.

Van Dyke and Hoyt (133:86) reported that in their study the question of whether or not the mother worked was of little value in differentiating dropouts from persisters.

Socioeconomic status--Nearly all studies of this factor have reported that the majority of dropouts come from the lower socioeconomic class. Fink (43) is a notable exception. He studied eighth- and ninth-graders in eight Grand Rapids, Michigan, secondary schools, and based his figures only on those who had dropped out by the time they reached the legal dropout age. He concluded that socioeconomic status was not a factor determining school persistence.

Other studies have found social class to be greatly associated with school persistence. Hollingshead (57:331-32) found that all the youth of high-school age of the upper classes were in school. The lowest social class contributed 8 out of 9 of the dropouts. In Class III (the middle class) all the boys and girls finished eighth grade, and 11 of 12 of those who eventually dropped out had entered high school. Sixty-four percent of Class IV children and 75 percent of Class V children (lowest class) had dropped out of school before they were 16 years old.

In a more recent study, Bowman and Matthews (14:23) rated pupils in social class by following Warner's Index of Status Characteristics. The index was based on occupation of father, type of house and residential area in which he lived, and source of family income. The index scores were then converted into T-scores. The mean T-score for dropouts was 43.31, which was two-thirds of one standard deviation below the mean of the entire group.

Table 14 shows Bowman and Matthews' figures on dropouts and graduates of each social class, by sex. While the upper and middle classes comprised only 34.1 percent of the total number studied, they contributed 42.9 percent of the total graduates. The lower classes comprised 65.5 percent of the total number, but contributed only 56.7 percent of the graduates, and 87.7 percent of the dropouts. While only 4.7 percent of the upper and upper-middle classes dropped out, nearly one-third (30.1 percent) of the upper-lower and nearly one-half (48.9 percent) of the lower-lower classes withdrew.

When Bowman and Matthews compared droupouts with persisters matched on sex and total score on Index of Status Characteristics, they found a consistent trend for fewer dropouts to come from higher social areas and more to come from lower social areas. In other words, more persisters than dropouts in the same social class lived in better neighborhoods among neighbors of superior social status (14:26-27).

In contrast, a study of dropouts in Rochester, New York (87) found that the majority of dropouts did not reside in socioeconomically depressed areas. It did find, however, that the difference in dropout rates between boys and girls is associated with residential area. In areas of socioeconomic advantage, the male dropout rate was significantly higher than the female rate; the reverse was true in areas of socioeconomic advantage.

Miller (84) reported data for Tucson, Arizona, by census tracts. The 45 tracts in the city were divided into five major groups on the basis of proximity and degree of similarity in the population in income, educational achievement, and housing conditions. Table 15 shows the relationship of each tract to selected variables, and indicates a direct relationship between family income, type of home (broken or intact), and physical condition of residence (except in the case of a reversal between Tracts IV and V) and percent of dropouts.

Finally, Bowman and Matthews (14) reported differences in socioeconomic status among early, middle, and late dropouts. They found that late dropouts (those who withdrew at age 16½ or older) had consistently higher social status. They also noted that early girl dropouts (those who withdrew before age 16) had somewhat higher socioeconomic status than was expected, and hypothesized that this group seemed to have more purpose for dropping out (marriage plans or pregnancy).

Type of home--Many studies have dealt with the question of type of home--broken or intact--from which the dropout comes. Most have found that the dropout, more frequently than the persister, comes from a broken home.

Lanier (71) defined a broken home as any home situation other than a pupil's living with his natural parents. On this basis, he found that, when matched on IQ, 45 percent of dropouts, compared with 28 percent of graduates, came from broken homes.

Hamreus (50) matched dropouts with stayins on sex, IQ, and socioeconomic status, and found that dropouts were more likely to have separated parents.

Van Dyke and Hoyt (133:85) reported that 27 percent of the dropouts and 11 percent of the persisters in their study came from broken homes. Young (144:90) reported 31 percent of the dropouts were from broken homes.

Dillon (36:19), the Indiana Study Commission (40), and Williams (141) reported that 71 percent, 67 percent, and 70 percent of dropouts, respectively, lived with both parents.

Using multiple regression analysis, Duncan (39:59) found that growing up in an intact rather than a broken family resulted in 0.98 years more schooling for a boy, when number of siblings, occupation of family head, and head's education were held constant statistically.

Parents' attitude toward education--Many researchers have considered attitude of parents toward education an important factor influencing their children's persistence in school. Many studies have found that parents of graduates are more positive toward the importance of education for their children than are parents of dropouts. Other studies have found no significant differences.

Mannino (79:197) questioned mothers of dropouts and mothers of children still in high school. The findings were:

Opinion	Responses of mothers of: Dropouts	In-school youth
School is more important than work in preparing youth for life	66.2%	82.4%
Education is not necessary	3.9	5.8
Compulsory attendance law does not require too much schooling	100.0	100.0
Education is more important today	90.9	91.2
Parental participation in school activities is helpful	90.9	94.1
There is no difference in the importance of education for a boy or for a girl	62.3	50.0
My child should have more education than I had ...	98.7	94.1

Mannino also found that both groups of mothers wanted their children to have at least a high-school education. The differences between groups of mothers seemed to be in the areas of advice-giving and consulting teachers All mothers of children still in school said they would advise their children in matters relating to continuing their education, while 87 percent of dropouts' mothers so indicated. On consulting with teachers nearly half (47 percent) of mothers of persisters thought they should consult teachers, compared with 30 percent of mothers of dropouts (79:199).

Cervantes (20) asked youth what their parents thought. All parents of graduates and 80 percent of parents of dropouts wanted them to graduate from high school. Nearly one-fourth (22 percent) of the dropouts reported that their parents wanted them to continue into college and graduate school.

These findings, however, are the exceptions. A study in New York (132:13) found that 90 percent of parents of graduates thought that continued school attendance was of crucial importance for their children; only one-third of dropouts' parents expressed that opinion.

Reporting surveys in New York State and in rural Louisiana, Schreiber (108) revealed that two-thirds of the parents of school dropouts

TABLE 14.--DROPOUTS AND GRADUATES BY SOCIOECONOMIC STATUS

Social class	Total number	Percent of total	Graduates		Dropouts		
			Number	Percent	Number	Percent	As percent of social class
1	2	3	4	5	6	7	8
Upper and upper-middle .	43	8.8%	41	11.7%	2	1.4%	4.7%
Boys	22	4.5	21	6.0	1	0.7	4.5
Girls	21	4.3	20	5.7	1	0.7	4.8
Lower-middle	123	25.3	109	31.2	14	10.1	11.4
Boys	59	12.1	51	14.6	8	5.8	13.6
Girls	64	13.1	58	16.6	6	4.3	9.4
Upper-lower	186	38.2	130	37.2	56	40.6	30.1
Boys	91	18.7	57	16.3	34	24.6	37.4
Girls	95	19.5	73	20.9	22	16.0	23.2
Lower-lower	133	27.3	68	19.5	65	47.1	48.9
Boys	75	15.4	42	12.0	33	23.9	44.0
Girls	58	11.9	26	7.4	32	23.2	55.2
No information	2	0.4	1	0.3	1	0.7	0.5
Boys	0	0.0	0	0.0	0	0.0	0.0
Girls	2	0.4	1	0.3	1	0.7	0.5
Total	487	100.0	349	99.9	138	99.9	
Boys	247	50.7	171	48.9	76	55.0	
Girls	240	49.2	178	50.9	62	44.9	

Source:
Bowman, Paul H., and Matthews, Charles V. Motivations for Youth for Leaving School. U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project, No. 200. Quincy, Ill.: University of Chicago and Quincy Youth Development Project, September 1960. p. 24.

held negative and indifferent attitudes toward education and believed that lack of a high-school diploma was no obstacle to their children's later development and success. Almost all parents of in-school pupils considered lack of a diploma a serious obstacle.

Some studies make finer distinctions among attitudes of parents. Miller (84) discussed a study of 616 dropouts in Utah, and listed five categories for attitudes of parents of dropouts toward their children's dropping out. The results were: 17 percent definitely against; 27 percent moderately against; 23 percent passive; 18 percent in favor; and 8 percent definitely in favor. Thus, in this study, almost one-half of the parents of dropouts were either indifferent or favorable toward their children's withdrawal.

Bowman and Matthews (14:63) combined opinion and action in their questions to parents of dropouts and graduates matched on IQ and socioeconomic status. Here are the findings:

Opinion	Parents of dropouts	Parents of graduates
Opposed child's dropping out	11.6%	59.8%
Wanted child to stay, but did nothing	36.2	18.9
Wanted child to drop out, but did very little.	0.7	2.4
Indifferent	29.7	6.3
Influenced child to drop out	5.1	...
No information	16.7	12.6

Snepp (114) rated the homes of 208 dropouts. He found that 47 percent of the dropouts came from homes judged weak (did not command the respect of the child and did not cooperate with the schools), while only 19 percent came from good homes (parents cooperated with the schools and encouraged the child).

Education of parents--Most studies have found that parents of dropouts tend to have

less education than parents of persisters. An exception was Boggan (13), who concluded that education of parents does not significantly differentiate dropouts from graduates.

Van Dyke and Hoyt (133:51) analyzed the relationships between dropping out and education of mother, father, and both parents, and in all cases found that the lower the educational attainment of the parent(s), the greater the tendency for a child to drop out. Results are given below:

Educational attainment of parents	Dropouts	Graduates
Neither parent had graduated	67%	38%
One parent had graduated, one had not	17	15
Both parents had graduated	13	28
Both parents had post-high-school work	1	7

Williams (141) reported a survey in Maryland which found that 79 percent of the mothers and 80 percent of the fathers of dropouts had themselves not graduated from high school; 63 percent of the fathers and 57 percent of the mothers of dropouts had less than 10 years of education; 31 percent of the fathers and 24 percent of the mothers of dropouts had a sixth-grade education or less.

Blesdoe (10) expressed the education of parents of dropouts as a ratio of the education of parents of the entire student population. A ratio of 1.00 indicates that the frequency found equals the frequency expected. Results were: parents had 1-4 years of school, 1.08; 5-6 years of school, 3.15; seven years, 4.86; eight years, .92; 1-3 years of high school, .39; high school graduates, .01; some college, .00.

In her study of educational attainment, Duncan (39:59, 61) concluded that "were a single background characteristic to be selected whose effects on schooling were both sizable and stable, it would be father's education." She reported that an increase of one year in educational attainment of the family head resulted in 0.24 years more schooling, when number of siblings, family type, and head's occupation score were held constant statistically. The effect of head's education was a little greater among nonwhites than among whites.

Income and financial need--It has often been assumed that many pupils drop out of school either because they could not afford the expenses of school or because their families needed financial contributions from the youths.

Bowman and Matthews (14:28-29) found this hypothesis apparently untrue. Compared with graduates matched on IQ and socioeconomic status, dropouts showed less concern about earning a living, both during school attendance (half as large a percentage had part-time jobs) and six months after leaving school (55 percent of dropouts, 70 percent of graduates were self-supporting). In this study over twice as large a percentage of dropouts owned cars (26 and 11 percent).

The U. S. Department of Labor (130:74) also found that all graduates had more work experience during school years than all dropouts (70 percent compared with 39 percent).

TABLE 15.--DROPOUT AND GRADUATION RATES IN TUCSON PUBLIC HIGH SCHOOLS, 1960-61, AND SOCIOECONOMIC DATA ON CITY POPULATION, BY GROUPS OF CENSUS TRACTS, 1960

	Census data					High-school data	
Census tracts by groups	Total population	Median years of school	Median income	Percent of housing deteriorating or dilapidated	Percent of adults separated or divorced	Percent of pupils enrolled who dropped out	Percent of pupils who graduated from high school
1	2	3	4	5	6	7	8
I	28,195	8.4	$3,669	43.2%	8.1%	17.1%	37%
II	44,052	10.2	4,726	24.3	5.0	10.5	58
III	39,996	11.8	5,308	10.1	4.6	10.4	75
IV	47,863	12.3	5,873	2.5	3.6	7.0	70
V	80,367	12.6	6,804	6.2	4.2	3.7	90
Total	240,473						

Source:
Miller, Leonard M. "The Dropout: Schools Search for Clues to His Problems." School Life 45: 5-7, 30-33; May 1963.

On the other hand, Hamreus (50) found that dropouts worked about twice as many hours per week out of school and had worked more summers than stayins matched on sex, IQ, and socioeconomic status. Boggan (13) also found that graduates less often had outside employment.

Stevens (117), in contrast, found no significant differences between dropouts and graduates on employment experiences.

Duncan (39:217), studying only white males from intact homes, reported that as family income rises, the percentage of boys not enrolled in school falls.

Bienstock (8) found that twice as many dropouts as graduates came from families in the lowest income bracket (35 and 17 percent), while twice as many graduates as dropouts came from families in the highest income bracket (23 and 12 percent).

TABLE 16.--HOLDING POWER OF 128 LARGE CITY SCHOOL SYSTEMS[a]

Group	Population of group	Number of cities	Number of graduates per 1,000 enrolled in grade 10 three years earlier			
			1960	1961	1962	1963
1	2	3	4	5	6	7
A	600,001 or more	16	648	638	638	668
B	300,001-600,000	25	718	705	713	728
C	200,001-300,000	16	738	730	735	737
D	90,000-200,000	71	750	742	747	763
Total .	Over 90,000	128	692	683	687	708
U.S. ..	...	...	744[b]	...	744[b]	760[c]

Source:
Schreiber, Daniel L. Holding Power/Large City School Systems. Washington, D.C.: National Education Association, Project on School Dropouts, 1964. p. 32.

a/ Based on enrollments in public secondary schools.

b/ Based on U.S. Office of Education figures for 48 states and Washington, D.C.

c/ Calculated by NEA Project on School Dropouts.

Cervantes (20), in his study of dropouts and persisters matched on, among other factors, socioeconomic class, found that the average family income of both groups was less than $5,000 a year (compared with a U.S. average of $7,020 during the same time period) and the average number of children per family for both groups was four. He concluded that the financial strain on families of persisters and dropouts was about the same. He reported that less than 5 percent of the dropouts could be judged to have withdrawn because they could not afford to continue in school. Cervantes cited a study by Mowrer which found that only 3 percent of 2,579 dropouts in St. Louis withdrew either because of financial need or because they were needed at home.

Other family-related factors--Manning (79:200) found no significant relationship between mothers' expectations for their children's occupation and the persistence of youth in school. He found that a larger proportion, significant at the .05 level, of stay-ins' mothers than dropouts' mothers were acquainted with families who had children attending college.

Cervantes (20) attempted to evaluate the feelings within the homes of dropouts and persisters. His evaluations were based on responses to direct questions during interviews. In each case, the youth's response was rated on a five-point scale (ranging from very negative to very positive). In each case, differences were significant beyond the .001 level of confidence and favored the family of the graduate. The highlights are as follows:

1. Is there understanding and acceptance among family members in your home? 84 percent of dropouts, little or very little; 82 percent of graduates, some, much, or very much

2. Do you feel accepted and understood by your family? 21 percent of dropouts and 84 percent of graduates, "Yes"

3. Do you accept and understand the members of your family? 79 percent of dropouts, little or very little; 82 percent of graduates, some, much, or very much

4. How frequent are communications within the home? 81 percent of dropouts, infrequent or very infrequent; 80 percent of graduates, some, frequent, or very frequent

5. With how many members of your family can you confide? 62 percent of dropouts, with less than half; 88 percent of graduates, half or more

6. Is your home happy or unhappy? Dropouts: 62 percent unhappy, 25 percent indifferent; graduates: 22 percent unhappy, 14 percent indifferent

7. How often do all members of your family participate together in leisure-time activities? 79 percent of dropouts and 75 percent of graduates, infrequently or very infrequently

8. Did your family encourage or help you in plans for a good job or for school? 40 percent of graduates little or very little

9. Did your parents push you too much? 18 percent of dropouts and 2 percent of graduates, "Yes".

Duncan (39:61) reported that, together, the four family background factors of family type, amount of schooling of family head, socioeconomic status of family head's occupation, and number of siblings accounted for 30 percent of the variance in schooling among males studied. These four factors accounted for a substantially higher proportion of the variance in schooling among whites than among nonwhites.

Factors Related to the Community

Geographic region--Some studies have attempted to show that rate of school withdrawal is related to geographic region of the United States. Data from Table 3, page 8, do show some distinct differences, as seen below.

Region	Dropout rate
Far West	12.1%
Hawaii	15.5
Plains	17.0
Rocky Mountains	18.2
Great Lakes	19.3
Mideast	20.3
New England	21.5
UNITED STATES	22.7
Alaska	27.4
Southwest	28.6
Southeast	31.8

Stice (118) made a follow-up study of 9,500 students who, as high-school sophomores, had taken a test of academic aptitude. On the basis of these test scores, he classified students as low (least able third), average, high (most able third), or very high (most able 10 percent), and then grouped them by region of residence. His figures showed that while the dropout rate among the least able third was about the same among regions, a much larger percent of able (15 percent) and very able (14 percent) students in the South had dropped out of school. The Western region had corresponding figures of 10 and 7 percent. Figures for both the Northeast and Midwest regions were 6 percent and 3 percent.

Dentler and Warshauer (35:56) also investigated dropout rates by region. Their results were:

Region	Number of cities reporting	Mean dropout rates	
		White	Nonwhite
New England-Middle Atlantic	33	18.2%	30.8%
East and West North Central	36	17.0	25.2
South	39	18.9	27.2
Mountain and Pacific	23	13.8	20.0

On the surface there appear to be differences among regions. These investigators concluded, however, that "region is not correlated with...dropout rate...after the social and economic differences of the various cities have beeen considered." (35:56).

Barker and Hensarling (3) reported that the following factors correlated significantly (.01 level of confidence) with state retention rate:

Variable	Correlation with retention
Percent of Selective Service registrants failing mental test	-.71
State expenditures per pupil in attendance	.69
Percent of voting age population voting in 1960 election	.68
Infant mortality rate	-.68
State and local revenue per pupil in attendance	.66
Percent of illiteracy	-.66
Personal income per capita	.61
Personal income per enrollee	.60
Disposable income per capita	.58
Proportion of local support	.55
Teachers' salaries	.53
Proportion of state support	-.51
Urban population as percent of total	.46
School enrollment as percent of population	-.46
Pupil-teacher ratio	-.45
Retail sales	.44
Percent of federal support	-.43

Rural-urban differences--Studies of this factor have reported contrasting results. Cook (27) found no significant differences between dropout rates of Arkansas schools in urban and in rural districts. The New York State Division for Youth (87) reported that the dropout rates in two rural New York counties were lower than those of three large cities. Another study (132) found that retention rates in large

cities and in small rural districts were not as high as those in communities of intermediate size and location.

Lyda and Copenny (78) studied factors related to rural and urban Negro dropouts in a county in Georgia, and found several differences between the two groups. A greater number of urban dropouts withdrew at age 10, while more rural dropouts withdrew at age 17. Males predominated among rural dropouts, while more urban dropouts were females. The groups did not differ significantly in intelligence or in problems in the areas of home and family, citizenship, temperament, or health. Urban dropouts more often had problems in the areas of vocational and economic, education, morals and religion, and personal relationships, while rural dropouts more often had problems in courtship, sex and marriage, and social and recreational areas.

Size of community--Studies of the relationship of city size to school holding power have arrived at nearly the same conclusions.

The NEA study of holding power in large city school systems (106) determined holding power by comparing the number of pupil's enrolled in grade 10 with the number graduating two years later. The holding power rates were found to be inversely proportional to the size of the city, as shown in Table 16.

Segel and Schwarm (113:7) studied holding power in 14 large cities. They included in their study only voluntary withdrawals (those over which the school presumably had control). As shown in the figures below, except for the first year, schools in the smaller cities had greater holding power.

	Holding power (in percent)	
Year of study	Group A (N=11) pop. 200,000-1,000,000	Group B (N=3) pop. over 1,000,000
First	95.3%	95.5%
Second	86.1	81.1
Third	77.0	69.3
Fourth	71.5	62.0

Using data from the 1960 Census, the U. S. Department of Agriculture conducted an extensive study of Characteristics of School Dropouts and High School Graduates, Farm and Nonfarm (31). Table 17 reports the findings on school dropout rates for 16- and 17-year-olds, by region, type of community, and race. Data initially showed that dropout rates were highest in rural, nonfarm areas and lowest in central fringe areas. Dropout rates were higher for nonwhites than for whites, and higher in the South than in the North and West. The report continued, however, by noting that when parental income, parental education, and parental occupation were taken into account, rural-urban differences in dropout rates largely disappeared.

In her study, Duncan (39:99) also used data from the 1960 Census, but she limited her population to males. When she classified males by region of birth (North, West, or South), and by type of community in which they grew up (urban, rural, farm), she found that the highest ranked group, men of the urban West, had a mean educational attainment four years greater than that of the farm South, the lowest group. When the factors of fathers' occupation and education and number of related children in the home were controlled, the positive effects of residence in the urban West and urban North were reduced, while the negative effects of residence in the rural and farm South were also reduced. And when two additional factors--family income and room crowding in the home--were taken into consideration, the percent not enrolled in the rural South was lower than for any other residence category.

These studies seem to indicate that type and place of residence are not in themselves determinants of school withdrawal.

General community characteristics--Several extensive studies have related other community characteristics to that community's dropout rate.

Young (145) studied 81 public high schools in communities within a population range of 25,000 to 65,000 in nine Northeastern states. He found that six variables showed positive correlations, significant at the .01 level of confidence, with school holding power. They were median monthly rentals (.43); mean income (.40); median school grade of adults in community (.38); percentage of professional workers in the employed population (.38); percentage of home ownership (.37); and median teachers' salary (.34). Significant at the .05 level of confidence were per-capita student expenditures (.31), percentage of overcrowded dwelling units (-.33), and 1960 population of the community (-.28). From these findings, Young developed a prediction equation for this type of school (high schools in Northeastern communities within population range). It was: Holding Power = 91.574 + .054 median monthly rentals (standard error of estimate plus or minus 2.105).

Dentler and Warshauer also studied community factors related to dropouts, and published their findings in Big City Drop-Outs and Illiterates (35). They first correlated selected social and economic variables with white and nonwhite dropout rates of each of 131 of the largest cities in the United States.

For whites, the multiple correlation between dropout rate and eight selected variables was

TABLE 17.--SCHOOL DROPOUT RATES FOR 16- AND 17-YEAR-OLDS, BY TYPE OF RESIDENCE, COLOR, AND GEOGRAPHIC REGION, 1960[a/]

Type of residence	North and West			South		
	Total	White	Nonwhite	Total	White	Nonwhite
1	2	3	4	5	6	7
Total	14%	13%	21%	22%	21%	25%
Urban						
Total	13	13	20	19	18	23
Central cities	16	15	21	20	18	24
Urban fringe	11	10	18	16	15	23
Places of 10,000 or more	13	13	21	20	19	23
Places of 2,500-10,000	12	12	22	19	19	20
Rural						
Total	14	14	28	24	24	27
Places of 1,000-2,500	12	12	14	19	18	23
Nonfarm	16	16	32	27	26	28
Farm	11	11	21	21	19	26

Source:
Cowhig, James D. Characteristics of School Dropouts and High School Graduates, Farm and Nonfarm, 1960. U.S. Department of Agriculture, Economic and Statistical Analysis Division, Economic Research Service, Agricultural Economic Report No. 65, Washington, D.C.: Government Printing Office, December 1964. p. 5.

a/ Dropouts are persons with less than 12 years of school completed and not enrolled in school.

.87. These factors, which accounted for 76 percent of the possible variance in dropout rate, were percent of labor force in white-collar occupations, 16 percent; percent of white families with incomes of less than $1,000, 16 percent; white adult functional illiteracy rate, 10 percent; percent of overcrowded housing units, 9 percent; percent of white families with incomes between $1,000 and $1,999, 8 percent; percent of population under five years of age, 7 percent; increase in total population from 1950 to 1960, 6 percent; and nonwhite dropout rate, 5 percent. In other words, cities having high percentages of low income families, illiterates, overcrowded housing units, population concentration (especially children under five), and more nonwhite dropouts compared with other cities, a low percentage of white-collar workers and a low recent population increase exhibit a higher white dropout rate (35:16-17).

Six variables produced a multiple correlation of .67 with the nonwhite dropout rate and accounted for 45 percent of the variance among cities. They were white dropout rate (19 percent), percent of nonwhite male operatives (8 percent), nonwhite adult functional illiteracy rate and percent of population who are nonwhite and non-Negro (6 percent each), and percent of nonwhite families with incomes of $10,000 or more and percent of nonworkers (4 percent each). The higher the first three variables and the lower the second three, the higher the nonwhite dropout rate (35:18-23).

The investigators then compared the predicted dropout rates, in light of the correlated social and economic variables, with the actual dropout rates for each city, and classified the cities into three groups. They found that 37 cities had white dropout rates ± one standard error beyond what was predicted, and 29 cities had deviant nonwhite dropout rates. They then investigated the social and economic conditions in these deviant cities. They found that cities with higher levels of per-capita revenue and higher expenditures on health and hospitals, and lower rates and lower average payments per family under Aid to Families with Dependent Children (AFDC) tended to have higher than predicted white dropout rates (35:28-31). Cities tending to have higher than predicted nonwhite dropout rates were those with higher average payments per family under AFDC and higher per-pupil expenditures (35:31-35). The investigators concluded that "departures of cities from expected levels of high school withdrawal, given their social and economic conditions, are related in large part to differences in per capita welfare, health, and educational program expenditures." (35:35) They suggested that the differing influence of these factors on white and nonwhite withdrawal may be a function of how these expenditures are received among the

TABLE 18.--SELECTED STUDIES OF MULTIPLE CORRELATION ANALYSIS OF FACTORS ASSOCIATED WITH EARLY SCHOOL WITHDRAWAL

Study	Location	Subjects	Controls	Selected factors	Correlation with withdrawal	Remarks
1	2	3	4	5	6	7
Duncan (39)	U.S. sample	Native civilian males		1. Type of family 2. Education of family head 3. Occupation of family head 4. Number of children in family 5. Place of residence of family		Investigator states that these factors "have a detectable influence on schooling at the present time and have had such an effect for some 50 years in the past."
Walsh (135) 1966	4 Missouri high schools	127 dropouts during 10th, 11th, or 12th grades	913 graduates	1. Grade point average 2. Participation in extracurricular activities 3. Elementary grades failed 4. Occupation of principal wage earner in family 5. Attendance record 6. Reading ability 7. Person with whom resided 8. Intelligence	Factors 1 and 2 .62 Factors 1, 2, 4 .64 Factors 1-4 .65 Factors 1-4, 7 .66 Factors 1-5, 7 .67 Factors 1-8 .70	Percent of difference between dropouts and graduates explained by factors: Factors 1 and 2 39% Factors 1, 2, 4 41 Factors 1-4 42 Factors 1-4, 7 44 Factors 1-5, 7 45 Factors 1-8 45
Harmeus (50) 1964	Spokane, Washington	Dropouts after eighth grade	Stayins matched on sex, intelligence, and socioeconomic status	1. Number of days absent from 8th grade 2. Number of hours worked per week out of school 3. Number of younger siblings 4. Attitude toward school		Discrimination function applied to numerous variables. These best distinguished dropouts from matched persisters.
Livingston (75) 1958	Illinois city	116 dropouts of all grades	193 persisters	1. Participation in informal school activities 2. Participation in formal school activities 3. Number of grades detained 4. Persons with whom student resided 5. Reading level 6. Scholarship rating 7. Mental ability 8. Attendance record in grade 6 9. Marital status of parents	Factors 1-4, .70 Factors 1-5 .67 Factors 1-3, 5-7 .64 Factors 1-3 .65 Factors 1-2 .57 Factors 3, 8 .57 Factors 3, 9 .56	Selected factors were based on elementary-school records.
Van Dyke and Hoyt (133:86) 1956	73 Iowa schools	406 male dropouts after 9th grade	406 male persisters matched on school last attended, sex, and year of entry into ninth grade	1. IQ 2. Composite scores on Iowa Tests of Educational Development 3. High-school grade point average 4. Number of extracurricular activities participated in 5. Educational attainment of parents	Factors 1-5 .625	Opstad (W-10), in a cross-validation sample, found that this formula correctly identified 84 percent of male dropouts, 80 percent of male persisters.
		362 female dropouts after 9th grade	362 female persisters matched as above	1. High-school grade point average 2. Percent of time absent 3. Number of extracurricular activities participated in	Factors 1-3 .653	Opstad (W-10), in a cross-validation sample, found this formula to correctly identify 81 percent of female dropouts, 79 percent of female persisters.

1	2	3	4	5	6	7
Kelly, et al. (66) 1964	Texas community	Study I. 201 males tested in 8th grade and records available four years later Study II. 201 males as above All had been previously identified as persisters (N=161) or deviants (25 dropouts and 15 delinquents)		1. 4 measures of psychomotor performance 2. Listening subtest--Sequential Test of Educational Progress 3. Language score--California Test Test of Mental Maturity 4. Surgency vs. Desurgency score--Junior Personality Quiz 5. Peer nominations as "Left Out" and "Wild One" 6. Index of Social Status		Factors initially identified by multiple discriminant analysis. Study I. Factors correctly identified 70 percent of subjects classified as deviants; 37 percent of false positives from normals. Study II. Factors correctly indentified 65 percent of deviants; misclassified 34 percent of persisters.
Childers (24) 1965	Walker County, Georgia	2 groups of dropouts who either withdrew during 9th grade or did not return to begin 10th grade	2 groups of stayins matched with respective groups of dropouts on sex, grade, and school	1. Number of grade retentions 2. Socioeconomic position 3. Participation in school activities 4. Occupational aspiration level 5. Responses on Cottle's School Interest Inventory 6. Language IQ 7. Non-language IQ 8. Number of school transfers 9. Personal adjustment 10. Social adjustment 11. Reading achievement 12. Number of natural parents with whom subject resided		Factors 1-11 significantly differentiated male dropouts from male stayins. Factors 1-5 and 12 significantly differentiated female dropouts from female stayins.

NOTE: Numbers in parentheses refer to items in the bibliography.

two groups, "with the white population receiving more of the benefits." (35:35)

Duncan (39) also studied educational attainment in terms of community characteristics. She found that for native, civilian males, the four community factors of rates of high-school graduates and manufacturing workers in the community, median family income, and rate of unemployment all have positive influences on teenage school enrollment in the community. Together these four factors usually account for 40 to 60 percent of the variance among communities in teenage enrollment rates (39:187-89).

Multiple Correlations of Factors Associated with Early School Withdrawal

Some investigators extract from their findings the factors which appear to be associated most closely with dropping out and simply list those factors. Others, going a step further, devise scales which, with varying degrees of accuracy, will differentiate potential dropouts from potential graduates. Still others report multiple correlation analysis. Table 18 summarizes selected studies of these types. Other studies in this area have been reported by Larson (72), Hopkins (59), Markus (80), and Paolucci (89).

Cervantes (20:198-99) listed 20 "central and characteristic tendencies" of dropouts in his extensive study in a "Dropout Prediction Table." The case history of a "typical" dropout--one who exhibits all of these tendencies--might read as follows:

> Mike's school problems seem to have begun when he failed first (and/or second, eighth, or ninth) grade. Since that time he has changed schools frequently. He is often tardy. His attendance has been irregular, with his excuse usually being a vague illness. His performance has consistently been below his potential, and most of his grades have been below the average for his class. In seventh grade he was two years behind the appropriate level for that grade in reading and arithmetic. Mike seems to have feelings of not belonging; he rarely participates in extracurricular activities. His behavior has required disciplinary measures.
>
> Mike's family situation appears to be unhappy; communication and acceptance among family members is lacking. His parents seem to have more children than they can readily control. Their affection and discipline have been inconsistent. There appear to be few family friends, and among these, most parents are separated or divorced, and their children are delinquents or school dropouts.
>
> Mike has few close friends his age. Most of his friends are not interested in school, and his parents do not approve of them.
>
> Psychological tests, particulary the TAT, have indicated that Mike has a weak self-image and deferred gratification pattern and is resentful of all authority.

What Happens to School Dropouts?

Few comprehensive follow-up studies comparing dropouts with graduates have been reported. Perrella and Waldman (93) reported a resurvey of dropouts and graduates, two years later. The original study (92; 123) was of 2.7 million out-of-school youth (16-21 years) in February of 1963. In the follow-up study in February 1965, 2.4 million of the original number were resurveyed. Of the graduates, 20 percent had returned to school during the two-year period, and 13 percent were still in school. Only 6 percent of the dropouts had returned to school, and only half of those were still in school. That some of the graduates had, by 1965, completed a year of college, influenced the findings.

The unemployment rates for both groups had decreased, but it was still high for dropouts (18 percent), while only 3 percent for graduates. Thirty percent of dropouts and 11 percent of graduates unemployed in February 1963 were also unemployed in February 1965. A larger percentage of graduates than dropouts had experienced no unemployment during the year 1964 (79.0 and 60.9 percent). While the largest proportions of both groups were employed as craftsmen, operatives, or laborers (graduates, 59 percent, dropouts, 74 percent), over one-fourth of graduates (28 percent), but only 11 percent of dropouts were employed in white-collar occupations. Differences between groups in proportions employed in service occupations or as farm workers were not great.

Much occupation change had occurred during the two years within both groups, but the overall occupational distribution in February 1965 differed only slightly from February 1963. However, the trend for both groups was toward upward mobility. The median weekly earnings during the two years rose from $61.09 to $98.54 for graduates, and from $50.84 to $61.88 for dropouts.

The study concluded that "the work progress of young men with less schooling is not as great as that made by their contemporaries who have finished high school or had some college... even in a period of expanding employment and incipient labor shortages (93:860).

Another follow-up study was made by Mueller (85) of 173 dropouts and 253 graduates matched on sex, age, academic ability, and socioeconomic

background. The purpose was to compare the two groups on their post-high-school vocational experiences, citizenship, recreational pursuits, and attitudes. The results indicated that graduates achieved a higher level of occupational status, had more favorable attitudes toward the extracurricular program of the school they had attended, and showed a greater interest in church attendance and activities. Other significant differences were small and led Mueller to conclude that "differences between dropouts and graduates--at least during the first few years out of school--may not be as great as claimed by many writers on the subject." (85:4482).

What Dropouts Think About Their Withdrawal

Dillon (36:62-63) questioned over 1,000 dropouts and found that nearly half (49.8 percent) regretted having withdrawn and gave as the main reason that more education would enable them to get better jobs. Those who did not regret leaving gave as reasons that they were failing, they were not interested, or nobody cared. There was no correlation between regretting and IQ or grade in which withdrawal occurred.

Havighurst and others (54:60) reported that a slightly larger percentage (56) wished they had stayed in school.

In Bowman and Matthews' study (14:47) 56 percent of the dropouts said they would definitely stay in school, and 34 percent reported they would definitely drop out, if they had it to do over again.

In Los Angeles (77) 710 former dropouts (ages ranged from 15 to 64) who returned to graduate from adult high schools were asked what they would do if they had it to do over

TABLE 19.--EMPLOYMENT STATUS OF HIGH-SCHOOL GRADUATES NOT ENROLLED IN COLLEGE AND OF SCHOOL DROPOUTS, BY AGE, SEX, AND COLOR, OCTOBER 1965

Age, sex, and color	Graduates		Dropouts	
	Percent of population in civilian labor force	Percent of civilian labor force unemployed	Percent of population in civilian labor force	Percent of civilian labor force unemployed
1	2	3	4	5
Both sexes				
Total, 16-21 years.	76.9%	8.4%	62.4%	14.9%
16-17 years	77.8	14.6	56.8	20.8
18-19 years	79.0	10.3	65.1	16.5
20-21 years	74.9	6.1	63.0	10.3
White	77.0	7.7	61.8	13.8
Nonwhite	76.2	15.0	64.8	19.0
Male				
Total, 16-21 years.	92.3	6.5	89.5	12.6
16-17 years	a/	a/	79.0	18.7
18-19 years.....	90.9	8.0	91.7	14.0
20-21 years.....	93.6	5.1	94.2	8.0
White	93.2	6.1	88.3	11.8
Nonwhite	85.9	9.8	94.1	16.0
Female				
Total 16-21 years.	68.4	9.9	38.0	19.7
16-17 years	69.0	a/	32.8	26.2
18-19 years	72.3	11.9	41.7	21.2
20-21 years	64.7	6.9	37.3	15.4
White	68.3	8.9	37.3	18.2
Nonwhite	69.4	19.4	40.9	24.8

Source:
Hamel, Harvey R. "Employment of High School Graduates and Dropouts in 1965." Monthly Labor Review 89: 643-49; June 1966.
a/ Base less than 100,000.

TABLE 20.--EDUCATIONAL ATTAINMENT OF EMPLOYED AND UNEMPLOYED PERSONS 18 YEARS OLD AND OVER, BY COLOR AND SEX, MARCH 1965

Years of school completed	Male				Female			
	Employed		Unemployed		Employed		Unemployed	
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
1	2	3	4	5	6	7	8	9
Less than 4 years of high school	42.0%	65.1%	61.0%	78.0%	34.2%	56.3%	46.6%	66.7%
Less than 8 years	10.6	31.2	16.5	32.7	6.6	20.8	10.7	15.3
8 years	12.9	10.6	16.5	8.6	10.3	11.6	9.5	8.2
9-11 years	18.4	23.3	28.1	36.7	17.3	23.9	26.4	43.2
4 years of high school or more	58.0	34.9	39.0	22.0	65.8	43.7	53.4	33.3
12 years	33.5	21.6	26.0	18.0	44.0	28.4	42.0	30.6
13-15 years	11.1	6.4	8.6	1.6	11.1	6.6	8.2	2.7
16 years or more	13.5	6.8	4.4	2.4	10.7	8.6	3.2	...
Median school years completed	12.2	10.1	10.8	9.7	12.4	11.2	12.1	10.8
Total: Number (1,000's)	39,981	4,231	1,670	372	20,575	2,966	1,030	294

Source:
Johnston, Denis F., and Hamel, Harvey R. Educational Attainment of Workers, March 1965. U.S. Department of Labor, Bureau of Labor Statistics, Special Labor Force Report No. 65. Washington, D.C.: Government Printing Office, 1966.

again. One-fourth said they would drop out of day high school and return to graduate from adult high school, and 68 percent said they would stay in day high school through graduation. One percent would drop out and never return, and 6 percent chose other alternatives.

Coates (26) reported that dropouts had become discouraged after many unsuccessful attempts to gain profitable employment and to be accepted into adult status.

Employment

In October of 1965, one-third of the 5.6 million 16- to 21-year-old youths in the labor force and no longer in school had not graduated from high school. The U. S. Department of Labor estimated that, of the 26 million youth entering the labor force between 1960 and 1970, 8.9 percent will have a grade school education or less, and 20.2 percent will not have completed high school.

Statistics on employment of school dropouts are abundant, and most indicate that unemployment rates among school dropouts are much higher than among high-school graduates. Schreiber (107:73) gave the following analysis:

> Unemployment falls heaviest on the less educated. There is a high correlation--almost a universal law--between employability and the number of years of schooling; and this holds true whether or not the demand for workers is great or small. In 1952, when almost all persons who wanted to work could find work, the educational level of all workers was 10.9 years but it was 9.6 years for the unemployed. In 1963, when unemployment was at a high plateau of 6 per cent, the educational levels were 12.11 years and 10.6 years respectively. The educational level of all persons has increased during the past decade, but the educational gap between the employed and the unemployed has widened.

Table 19 shows unemployment rates of high-school graduates and dropouts in October 1965. For both males and females, in all age groupings, rate of unemployment was higher for dropouts than for graduates. In all cases, nonwhites had a higher rate of unemployment than whites.

Table 20 gives the educational attainment of employed and unemployed persons in March 1965.

The U. S. Department of Agriculture study (31:iii) noted that "differences in unemployment rates between male dropouts with some high school experience and those who had only a grade school education were negligible." It continued: "This may reflect the greater importance attached to a high school diploma itself than to completion of a given level of school before graduation."

Occupation of Employment

Wilstach (143) conducted a follow-up study of high-school dropouts in Los Angeles. Of the 159 located, 68 were working. Of these, 51 percent were working at unskilled jobs. Semiskilled jobs ranked a low second, with 15 percent so employed. Other percentages were service, 13 percent; clerical, 12 percent; sales, 6 percent; skilled, 3 percent. (Wilstach noted that no more than three of the 68 were rated by their employers as unsatisfactory on each of seven items rated.)

Table 21 compares the occupations of employed high-school graduates and school dropouts, 16 to 21 years old. The figures show that male graduates, much more often than male dropouts, are employed in white-collar occupations. Greater percentages of white male dropouts than white male graduates are employed in each of the other occupational groups. The figures for nonwhite males are markedly different. Generally, nonwhite males, both dropouts and graduates, have lower status jobs than their white counterparts. For example, a much greater percentage of white dropouts than nonwhite graduates (12.1 percent and 4.7 percent) are employed as craftsmen and foremen, while a much greater percentage of nonwhite graduates than white dropouts (21.3 percent and 5.7 percent) are employed in the service occupations. While differences between white and nonwhite males are present, the figures do show that generally the male high-school graduate is employed in a higher-status occupation than a male school dropout.

Three-fourths of white female graduates are employed in white-collar occupations, while white female dropouts work in blue-collar or service occupations (36 percent and 34 percent). Nearly one-third of nonwhite graduates hold white-collar jobs, but an even greater percentage (45) work in service occupations. Half of the nonwhite dropouts work in service occupations, but over one-third are farm laborers.

Employment Outlook

A look at the occupations of dropouts, in terms of the unemployment rate in those occupations and projected growth of those occupations, makes it clear that dropouts, generally, are employed in those occupations which have the greatest unemployment rate or least growth potential.

Table 22 shows figures for each category. Table 23 shows the rank of each category. These figures indicate that in the coming years, both dropouts and high-school graduates with no further training or education will find it difficult to get a job. Dropouts will have an especially difficult time. For example, male dropouts most often (rank of 1), and female dropouts nearly as often (rank of 2) are employed as operatives. In September 1966 this type of occupation had the third highest unemployment rate and ranked seventh in projected percent of change during the years 1960-1975.

Economic Consequences

To the dropout--Many statistics on the economic advantages of continuing in school through high-school graduation are available. Table 24 gives one set of figures, in median annual income in 1964. It shows that, as the amount of education increases, the median annual income increases. Table 25 gives figures on median school years completed by income levels.

Kastner (65) pointed out the economic losses to school dropouts, over 25 years of age, in terms of mean lifetime income. He determined that, in 1963 dollars, males and females completing eighth grade could anticipate a mean lifetime income of $52,343 and $33,340, respectively, above those who did not finish eighth grade. Attendance for one to three years of high school would afford a male an additional $30,871 and a female, $13,216 above one who had completed only eighth grade. High-school graduation would mean an additional $45,884 to a male and an additional $38,111 to a female.

Beymer (6) pointed out, however, that the single factor of amount of education cannot be considered "the cause" of lower or higher income. He cited a longitudinal study of 702 Massachusetts students where the wide overlaps in income between groups with varying amounts of education caused the researcher to conclude that "the apparent link between years of schooling and income is accidental, with the real 'cause' stemming from a combination of intellectual capacity, motivation, and social class values." (6:67)

To the nation--"Costs borne by the nation" because of school dropouts was also of concern to Kastner (65). He discussed this problem in terms of loss in national income, slow-up in growth rate of the national economy, and federal allocations for unemployment compensation. (One study (94) reported that 85 percent of women on welfare in Cook County, Illinois, had never finished high school.) Kastner also pointed to the manpower needs of our industrial age. If some workers lack technical skills and are unable to be retrained, the result might be "serious bottlenecks" which could cause extended unemployment for workers in related occupations.

What Can Be Done To Reduce the Number of Dropouts?

What Should Be Done?

There are nearly as many answers to this question as there are writers on the subject of school withdrawal. While most believe an

TABLE 21.--MAJOR OCCUPATION GROUP OF HIGH-SCHOOL GRADUATES[a] NOT ENROLLED IN COLLEGE AND OF SCHOOL DROPOUTS,[a] BY SEX AND COLOR, OCTOBER 1964

Major occupation group	Males						Females					
	Total		White		Nonwhite		Total		White		Nonwhite	
	Graduates	Dropouts	Graduates	Dropouts	Graduates	Dropouts	Graduates	Dropouts	Graduates	Dropouts	Graduates	Dropouts
1	2	3	4	5	6	7	8	9	10	11	12	13
All occupation groups												
Number (in thousands)	1,429	1,070	1,304	848	125	222	1,774	483	1,603	380	171	103
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
White-collar occupations	27.4	7.3	29.4	7.8	7.8	5.4	70.1	18.9	74.3	23.5	31.8	1.9
Professional, technical, and kindred	6.6	0.4	7.0	0.2	3.1	0.9	5.8	...	6.0	...	4.0	...
Managers, officials, and proprietors, except farm	3.0	1.0	3.3	1.3	...	...	1.2	1.2	1.4	1.6	...	...
Clerical and kindred workers	12.5	3.3	13.4	3.5	3.1	2.7	57.4	13.2	60.9	16.2	24.9	1.9
Sales workers	5.3	2.6	5.7	2.8	1.6	1.8	5.7	4.5	6.0	5.7	2.9	...
Blue-collar occupations	61.5	68.5	60.9	70.5	67.7	60.5	10.6	31.7	9.8	36.3	18.5	14.6
Craftsmen, foremen, and kindred workers	11.1	11.3	11.7	12.1	4.7	8.0	0.6	0.4	0.7	0.5	...	...
Operatives and kindred workers	34.9	35.5	33.7	37.8	48.0	26.7	10.0	30.7	9.1	35.0	18.5	14.6
Laborers, except farm and mine	15.5	21.7	15.5	20.6	15.0	25.8	...	0.6	...	0.8	...	...
Farm occupations	4.5	17.0	4.5	15.9	3.1	20.9	1.0	11.9	0.6	6.0	4.6	34.0
Farmers and farm managers	0.8	0.7	0.8	0.9	...	...	0.1	...	0.1	...	...	...
Farm laborers and foremen	3.7	16.3	3.7	15.0	3.1	20.9	0.9	11.9	0.5	6.0	4.6	34.0
Service occupations	6.6	7.3	5.2	5.7	21.3	13.3	18.4	37.4	15.4	34.2	45.1	49.6
Private household	0.2	...	0.2	...	0.8	...	4.8	18.7	2.9	14.4	22.0	35.0
Service, except private household	6.4	7.3	5.0	5.7	20.5	13.3	13.6	18.7	12.5	19.8	23.1	14.6

Source:

Bogan, Forrest A. Employment of High School Graduates and Dropouts in 1964. U.S. Department of Labor, Bureau of Labor Statistics, Special Labor Force Report No. 54. Washington, D.C.: the Bureau, June 1965. p. A10.

[a] Employed persons, 16-21 years of age.

all-out effort must be made to keep all pupils in school through high-school graduation, some disagree.

Tannenbaum (124:5) cited one writer who suggested that 5 percent of the total high-school population in New York City are in special programs for the handicapped, and another 5 percent "will probably become serious social problems, either involved in delinquency or severe emotional disturbance." It was believed that these groups are a "perennial source of dropouts, regardless of the amount of effort exerted to keep them in school."

Reynolds (98) believes that most dropouts lack ability and interest in academic subjects, and suggested that possibly the schools should keep potential dropouts out of school. He proposed apprenticeship programs in the junior high schools, an effective two-track system, or an increased use of a conservation corps, where youth can work until they find themselves.

Rovello (102) proposed that "some should be dropped out." Those students who have serious emotional problems, who are totally unmoved by the idea of learning, or whose parents have no respect for learning or authority, he says, "do not belong in a public school."

There is controversy, also, over what types of programs will be most effective in combating the dropout problem. Lichter and others (73:253) concluded that "help must be individualized for each student in accordance with the particular circumstances that create the emotional problems and school difficulties." Dentler and Warshauer (35:55), on the other hand, concluded that withdrawing from high school before graduation is not a problem of individuals, but that "there are significant psychological processes involved in dropping out, to be sure, but these are so structured that, in the aggregate, they occur only under predictable community conditions." At the other end of the continuum is Kennedy's assertion (67:363) that educators, not the dropouts, are the ones at fault.

With these wide differences of opinion about who and what is at fault, and what should be done, it is understandable that programs to prevent school dropouts encompass a wide range of activities.

Types of Programs

Programs concerned with school dropouts may be described in two ways: by sponsoring agency and by purpose. The sponsoring agency may be primarily an individual school or school system, the state, the federal government, or other agencies outside the school. The purpose may be preventive or remedial. Preventive programs range from preschool programs, to loosely organized clubs to meet the needs of potential dropouts, to separate school programs for potential dropouts. Remedial programs may include attempts to get dropouts to return (either to regular or adult high school), efforts to help the dropout find a job and succeed at it, or a combination. The primary concern of this section is preventive programs sponsored by the school or school system.

Although recent literature abounds with suggested programs, there appears to be a lack of research on their effectiveness. Schreiber discussed in general terms several types of programs and their results (108), and the role of the school in coordinating dropout programs (109). Bayley (4) described what schools and agencies in some cities are doing. Gowan and Demos (40), Burchill (10), Price (96), and Kvaraceus and Ulrich (70) discussed programs specifically or generally related to school dropouts. Cheyney (23) and Longstreth, Shanley, and Rice (76) discussed methods of evaluating programs.

Programs Sponsored by the School

Suggestions from dropouts--In an Evansville, Indiana, study (40:36) 15 of the 20 dropouts who were asked how the school could have helped them to remain stated that the school could not have prevented their withdrawal. Los Angeles dropouts were asked how the high schools could be improved (77:13). Over half (55 percent) could think of no changes, 21 percent suggested more and better counceling, 14 percent said the faculty should show more personal interest in students, and 7 percent mentioned stricter discipline. Dropouts in a study by Fallon and Reeves (41) suggested that teachers could show more sensitivity and interest in the pupil and his problems, and could make courses more practical, more related to their nonacademic future.

Dillon (36:57) asked dropouts what changes in the schools would have encouraged them to remain. Their replies, given by percent of frequency mentioned, were: provide work experience (23 percent), provide specific vocational instruction (15 percent), provide the services of a guidance counselor (12 percent), more personal contact with teachers, more participation in school activities and opportunity to change courses (11 percent each), smaller classes with more individual instruction (9 percent), and transfer to another school (8 percent).

Matika and Sheerer (81) reported the following suggestions from potential dropouts: (a) when the teacher has something to say to a student, he should say it in privacy; (b) teachers (and other adults) should show you by example and not just tell you; (c) the teacher should be a friend and help the student when he gets in trouble.

TABLE 22.--EMPLOYMENT OF SCHOOL DROPOUTS, UNEMPLOYMENT RATE, AND PROJECTED GROWTH OF MAJOR OCCUPATION GROUPS

Major occupation group	Percent of dropouts[a] employed in occupation, October 1964		Unemployment[b] rate September 1966	Projected percent change, 1960-1975
	Male	Female		
1	2	3	4	5
White-collar occupations	7.3%	18.9%	2.3%	...
Professional, technical, and kindred .	0.4	...	1.7	65%
Managers, officials, and proprietors, except farm	1.0	1.2	1.2	32
Clerical and kindred workers	3.3	13.2	3.3	45
Sales workers	2.6	4.5	2.8	34
Blue-collar occupations	68.5,	31.7	3.3	...
Craftsmen, foremen, and kindred workers	11.3	0.4	1.8	30
Operatives and kindred workers	35.5	30.7	3.6	18
Laborers, except farm and mine	21.7	0.6	5.8	...
Farm occupations	17.0	11.9	1.4	-29
Farmers and farm managers	0.7	...	0.2	...
Farm laborers and foremen	16.3	11.9	2.8	...
Service occupations	7.3	37.4	4.0	50
Private household	...	18.7	3.9	...
Service, except private household	7.3	18.7	4.0	...

Sources:

Columns 2 and 3: Bogan, Forrest A. Employment of High School Graduates and Dropouts in 1964. U.S. Department of Labor, Bureau of Labor Statistics, Special Labor Force Report No. 54. Washington, D.C.: the Bureau, June 1965.

Column 4: U.S. Department of Labor, Bureau of Labor Statistics. Employment and Earnings and Monthly Report on the Labor Force. Vol. 13, No. 4, October 1966. p. 29.

Column 5: U.S. Department of Labor, Bureau of Labor Statistics. Occupational Outlook Handbook. Bulletin No. 1375. Washington, D.C.: Government Printing Office. 1963. p. 23.

a/ For dropouts ages 16-21.

b/ By occupation of last job of unemployed persons.

Extent of school programs--In Indiana only 26 percent of 217 schools had an established program for identifying potential dropouts (two-thirds of those began in grades K-6, one-third in grades 7-9). Sixty percent reported a program for follow-up contacts with dropouts, and only half of those programs included an attempt to re-enroll the youth in school (40:51-52).

A study of 91 of the largest school systems in the United States (100) showed that only 17 had specialized educational provisions for dropouts, and only a small proportion of those required the teachers in those programs to have special training and experience. Of the 74 that did not have programs, 81 percent saw a need, but only 30 percent had plans to develop a special program.

School Programs for Potential Dropouts

Cassel and Coleman (19) gave the following list of what schools might do both to improve the school and to reduce the number of dropouts.

1. Conduct an effective guidance and counseling program
2. Provide broader instructional offerings
3. Make more careful selection and preparation of teacher personnel
4. Assure increased student involvement in cocurricular activities

5. Solicit involvement of total community resources

6. Maintain closer liaison and articulation with apprenticeship training

7. Maintain closer liaison with juvenile authorities

8. Make continuous evaluation and investigation of local retention.

Thompson and Nelson (127) gave similar suggestions. Beymer (6) also gave general suggestions. The University of the State of New York and the State Education Department cooperatedto publish a booklet entitled How High Schools Can Reduce Their Dropout Rate (131). School Management (105) described and discussed programs being conducted in Ithaca, New York.

Suggestions for improving the curriculum as a means of reducing the number of dropouts have come from Strom (120) and from Bristow (15). Saterlie (104:289-304) gave suggestions for emergency and long-range curriculum changes. The emergency curriculum would be a stop-gap procedure for potential dropouts who are nearing legal dropout age. Its purpose would be to give him "advice and skills that will immediately equip him to enter the world outside of school." Saterlie described such program changes in detail. Language arts courses would include remedial and "survival" reading (of forms, directions), writing skills (for letters of application), and only functional grammar. Social studies courses would include a study of community resources and the responsibility of the citizen in local and national undertakings. Mathematics and science courses would also be relevant to the outside world (consumership, banking, tax payments, budget, etc.). Curriculum in industrial arts, home economics, music and art, and physical education would also be closely related to student needs. She also discussed long-range curriculum for the slow learner and underachiever.

Hoyt (66) and Camp (17) discussed the role of the counselor in the process of school withdrawal. The NEA Project on School Dropouts, in cooperation with the American Personnel and Guidance Association, devoted an entire book to this problem (110).

Liss (74) suggested that teaching machines might help to "stem the dropout tide."

Dipasquale (37) believes ungraded classes in the elementary school and interclass grouping (on the basis of intellectual competence) in required academic subjects might help decrease frustration of failure often experienced by school dropouts.

Rich (99) discussed a Social Adjustment program which might be adopted for pupils whose behavior and/or emotional problems might cause them to drop out.

Table 26 summarizes selected studies which report special programs for potential dropouts. All reported some degree of success in some areas. The variety of programs is apparent.

Flynn, Saunders, and Hoppock (44) and Camp (18) reported special classes, with the course content cooperatively planned by students and teachers. Davis (34) reported that potential dropouts were given special attention outside class. Chamberlin and Catterall (21) found that accelerating overage potential dropouts by moving through two grades in one year apparently prevent some withdrawals.

Wilkerson (139) reported that potential dropouts in a work-study program had a lower withdrawal rate than matched controls. Young (146) reported that in his study, the work-study program was superior to reading- and guidance-oriented groups, and the three combined were significantly superior in the areas of retention, attendance, attitudes, conduct, and achievement to matched control groups. The New York STEP work-study program (7) has apparently had some degree of success. In Ithaca, New York (105), a distributive education program has been successful in holding dropouts in school and in preparing them for work.

TABLE 23.--RANKINGS OF MAJOR OCCUPATIONAL GROUPS ON EMPLOYMENT OF DROPOUTS, UNEMPLOYMENT RATE, AND PROJECTED GROWTH[a/]

Major occupational group	Projected growth, 1960-1975	Unemployment rate	Employment of dropouts	
			Male	Female
1	2	3	4	5
Professional-technical	1	7	9	...
Service	2	2	5	1
Clerical	3	4	6	3
Sales	4	5	7	5
Managers	5	9	8	6
Craftsmen	6	6	4	8
Operatives	7	3	1	2
Laborers	8	1	2	7
Farm	9	8	3	4

a/ Rank of 1 means greatest growth between 1960-1975, highest unemployment rate in September 1966, and most frequent occupation of dropouts. Rankings are based on Table 22.

Roberts and McGeever (101) discussed an occupational program for junior high-school pupils. A high school in New York studied factors associated with withdrawals in their school and attempted to improve school practices in these areas (95). Guidance facilities and elective offerings were increased, subject content was made more relevant to the outside world, an activity period was included in the school day, and the school's public relations program was improved. As an apparent result of these changes, the school's holding power rose from 59 percent for classes of 1946-1950 to 90 percent for classes of 1951-1954.

In place of or in addition to special counseling, academic, or work-study programs, some schools have clubs especially designed to meet the needs of potential dropouts.

Rundle (103) described a hot-rod club which proposed to tie the natural interests of high-school boys with school-sponsored and educational extracurricular activities. Rundle asserted that the hot-rod club channeled the interest in auto mechanics into a vocation with a shortage of workers and illustrated to the boys the importance of further education.

Jones (64) described a club for potential dropouts. Named the "Service Gents," the club's objective (developed by members) was to help students who might otherwise drop out of school, by promoting participation in school activities and a healthy educational attitude, and by helping members find employment. Strict rules (also made by members) were observed, and every member was required to show school improvement within the first month after joining; a member suspended from school was placed on probation in the club. Jones feels that many potential dropouts have remained in school because of participation in the "Service Gents."

Campaigns to urge dropouts to return to school--In the summer of 1963, the U. S. Office of Education, in cooperation with several national education organizations and local school districts, sponsored the 1963 Summer Dropout Campaign. Sixty-three cities participated; $250,000 from President Kennedy's special emergency fund was used for nationwide publicity and salaries for school counselors and other professional workers. A follow-up study of the campaign (129) revealed that slightly over half (51.5 percent) of the 59,301 dropouts and potential dropouts contacted returned to school in September. Of those returning, 92.4 percent were still enrolled in school one month later.

Strom (119:30) criticized this type of "cure" as irrelevant to the dropout's real problem, which is not his shortsightedness, but his belief that he is learning nothing of value. Hoping to remedy this situation and retain returned dropouts, some schools and school systems conduct separate programs for returnees. Research data on the effectiveness of such programs is limited.

New York City has a program entitled "Operation Return." Returning boys and girls must intend to remain in the program until graduation. So that these "older" pupils do not feel the embarrassment of being in classes with younger pupils, a separate program, with heavy emphasis on commerical and business courses, is operated.

Honn (58) reported the results of a program for returning dropouts in a Los Angeles high school. Field counselors contacted 270 dropouts

TABLE 24.--MEDIAN INCOME IN 1964 OF PERSONS 25 YEARS OLD AND OVER, BY EDUCATION, COLOR, AND SEX, FOR THE UNITED STATES

Classification of worker	Elementary school			High school		
	Total	Less than 8	8	Total	1-3	4
1	2	3	4	5	6	7
Male	$3,131	$2,520	$3,983	$5,910	$5,352	$6,266
White	3,339	2,690	4,043	6,084	5,537	6,389
Nonwhite	2,241	1,996	3,455	3,947	3,737	4,237
Female	992	873	1,297	2,025	1,636	2,369
White	1,075	912	1,332	2,077	1,661	2,404
Nonwhite	818	769	1,000	1,713	1,488	1,996

Source:
U.S. Department of Commerce, Bureau of the Census. Income in 1964 of Families and Persons in the United States. Current Population Reports, Series P-60, No. 47. Washington, D.C.: the Bureau, September 24, 1965. p. 39-40.

and invited them to return to school. The 105 who agreed to return met with counselors to plan courses and decide what school they would attend. Money was provided for needy pupils. Counseling continued throughout the year. At the end of the first semester, counselors were still working with 93 students, of whom 67 were still in school. At the close of the school year, 35 were still enrolled. Seven had graduated during the year. Of the 70 who had dropped out, 10 percent had moved or graduated. Reasons given for dropping out were family responsibilities (21 percent), lack of interest (20 percent), school problems (17 percent), and economic necessity (10 percent).

Hickman (56) reported a summer guidance program for dropouts in Orange County, California. Sixty students, selected as a representative sample of over 3,000 dropouts, met five hours a day for six weeks. They were required to take mathematics, English, and reading; the remaining two hours were used for counseling and activities. Representatives from the Selective Service, night high schools, and colleges spoke to the group. Fifty-five students completed the program. Five months later, 39 of those were in school, eight were working, and four were not working. Post-tests of achievement in arithmetic, reading, and spelling showed gains in mean scores for the group. Three students who had previously qualified for the educable mentally retarded program improved so much they were enrolled in regular classes in the fall. The writer believed that there were also unmeasurable positive gains such as growth in self-confidence and self-realization of own abilities, increased job aspiration level, and improved behavior and dress.

Taylor (125) and Birkmaier (9) discussed curriculum for returned dropouts.

Programs for nonreturning dropouts--Programs to help the dropout once he has withdrawn usually take the form of job up-grading programs. The Detroit Public Schools, for example, has considered successful its job up-grading program for youth 16 to 20 years of age (62). It is a year-round guidance program, with informal voluntary classes meeting each morning in 10 high schools. Emphasis is on the techniques of interviewing and finding and holding a job. Counselor-teachers keep in touch with participants after they have found work or returned to school. For those who have never worked, a supervised and subsidized six weeks or more of work experience gives the dropouts an opportunity to develop positive work attitudes. During one year, of those students who remained in the program more than 10 days, 41 percent were on jobs, 29 percent were in the process of up-grading, 4 percent returned to regular school, and 26 percent left the program.

Chansky (22) described and evaluated a program in North Carolina to rehabilitate high-school dropouts.

TABLE 25.--MEDIAN SCHOOL YEARS COMPLETED BY PERSONS 25 YEARS OLD AND OVER, BY TOTAL MONEY INCOME IN 1964

Income in 1964	Median school years completed	
	Males	Females
1	2	3
$1-999 or less	8.0	9.6
1,000-1,999	8.3	10.3
2,000-2,999	8.7	12.0
3,000-3,999	9.8	12.2
4,000-4,999	11.0	12.5
5,000-5,999	12.0	12.6
6,000-6,999	12.2	12.9
7,000-7,999	12.4	14.7
8,000-9,999	12.6	16.1
10,000-14,999	13.0	16.4
15,000-24,999	16.0	a/
25,000 and over	15.8	a/

Source:
U.S. Department of Commerce, Bureau of the Census. Income in 1964 of Families and Persons in the United States. Current Population Reports, Series P-60, No. 47. Washington, D.C.: the Bureau, September 24, 1965. p. 39.

a/ Base less than 200,000.

Programs Initiated and Supported by the Federal Government

In recent years the federal government has played an increasingly expanded role in public education and social reform. Millions of dollars have been allocated to state and local schools for programs which attempt to improve the quality of education and the quantity of educational services in the public schools. Because the dropout is a product of both our schools and our society, all of these programs could be said to be indirectly related to the dropout problem.2/

Among the aims of the Elementary and Secondary Education Act of 1965 is the support of

2/ The following discussion is based on: A Schoolman's Guide to Federal Aid. School Management Magazines, Inc., 1965. 32 p. Reprinted from School Management 9: 77-164; June 1965.

And on: U. S. Department of Health, Education, and Welfare, Office of Education. A Chance for a Change: New School Programs for the Disadvantaged. Washington, D.C.: Government Printing Office, 1966. "A Challenge for Dropouts," p. 16-19, and "Confronting the World of Work," p. 20-21.

TABLE 26.--SELECTED STUDIES REPORTING SPECIAL PROGRAMS TO PREVENT SCHOOL WITHDRAWAL

Study and year	Location	Purpose	Subjects	Controls	Description of program	Results	Remarks
1	2	3	4	5	6	7	8
Flynn, Saunders, and Hoppock, 1954 (44)	Huntington, N.Y. Toaz Junior High School	1. Prepare potential dropouts for work 2. Encourage some to remain in school by relating school to work 3. Fulfill social studies requirement	22 male potential dropouts, ninth grade, 15-18 years old	None	Class met 1 hour a day for 2 semesters content. Cooperatively planned, and included discussion of job requirements and application techniques, and field trips to industries.	20 of 22 subjects returned to school at beginn ng of 10th grade. According to principal, fewer absences and discipline problems.	...
Young, 1966 (146)	Dade County, Florida--4 junior high schools	Appraise relative effectiveness of 4 curricula from standpoint of retention, attendance, attitudes, conduct, and achievement	9th grade male potential dropouts who would reach age 16 before end of study; divided into 4 groups	9th grade male potential dropouts in regular school program matched with each experimental group	Four groups for subjects--3 followed a basic junior high-school program with variations 1. Emphasis upon reading 2. Work-study combination 3. Guidance orientation Group 4. Dropouts who had returned to school in the adult division.	The 3 basic experimental groups were slightly, but not significantly, superior to respective control groups. The work-study group was superior to the reading and guidance groups, which were fairly equal. 3 basic experimental groups combined were significantly superior ($p<.003$) to the overall control group.	...
Chamberlin and Catterall (21)	El Cajon, Calif. Greenfield Junior High School	Prevent dropping out through acceleratio. at the 7th grade level	34 (21 male, 13 female) average none 7th graders--average IQ 96, lower tested achievement than other 7th graders	None	Placed for 1 semester in special class designed to cover 7th and 8th grade material at same time Pretested on Metropolitan Achievement Test, post-tested on different form.	Median scores of subjects improved on all 10 subtests of MAT. Median growth in years ranged from 2.1 years in history to .4 years in Geography and Science. On all subtests median growth in years was at or above expected (normal) growth. Follow-up 2-1/2 years later--20 located, 18 still in school--3 rated by counselors as poorly adjusted, 15 satisfactory or better.	During session group lost 9 subjects: 2 moved, 2 could not do the work, and 5 were asked to leave because they would not work and/or behave.
Camp, 1963 (18)	Elgin, Illinois High School	Bring about favorable changes in concepts of self, achievement, and future	18 males randomly selected from list of those having failed 1 or more courses during previous semester and identified by counselor as potential dropouts. Age range, 14-17. Measured IQ range, 76-120	18 males randomly selected from remaining list, matched on chronological age and IQ	Subjects assigned to class taught by teacher counselor, controls assigned to elective class. Experimental class content unstructured and chosen by subjects, ranged from discussion of values to inspection of vocational information. Grade assigned by subject and teacher. Pre- and post-semester, semi-structured interviews with counselor, who recorded answers to open-ended questions.	Positive changes in subjects greater at or beyond .05 level than controls on: Pride in self and achievement Self-understanding, self-confidence Vocational information Value of formal education and high-school diploma Liked content and structure of courses Class activities evaluation Discussion of future with parents Discipline Subjects absent average of 1.5 days per pupil less than preceding semester and 0.65 days per pupil less than controls during experiment semester.	...
Davis, 1962 (34)		1. Keep potential dropouts in school longer 2. Raise achievement rate 3. Improve realism of concepts of self	21 graduating 9th graders. Group of 42 originally judged to be most likely to drop out during 10th grade stratified and grouped into 3 groups	21 remaining from group of 42 judged most likely to drop-out during 10th grade	During 10th grade, experimental group given special attention by way of field trips, formal and informal counseling interviews. Teachers and counselors made special effort to establish friendship relations.	Purpose: 1. No subjects, 3 controls dropped out during 10th grade. 2. Both groups' average scores on reading dropped and average scores on mathematics rose--no significant differences between groups.	Calif. Achievement Battery

1	2	3	4	5	6	7	8
		4. Decrease course failures 5. Decrease discipline problems	according to intelligence. These 3 groups divided into subjects and controls			3. No difference between groups on realism of self-concept of aptitudes, as judged by self-estimate of Differential Aptitude test scores. 4. Subjects had 19 failing marks, controls, 44. 5. Subjects had less severe discipline problems. Amount of intelligence not a factor except in marks--those of higher intelligence tended to get higher marks.	
Wilkerson (139:438)	St. Louis, Mo. high school	Increase school retention of potential dropouts	343 potential high-school dropouts. Approximate mean age, 17; mean IQ, 94; mean number of credits earned, 11	266 potential high-school dropouts roughly matched on age, IQ, and number of credits earned	Work-study program: during 1960-61, and 1961-62 school years, experimental subjects received normal school services plus special counseling, help in obtaining and holding jobs, and special on-the-job assistance from employer and school personnel Control group received normal school services.	Dropout rate for controls greater than subjects, by 5.7 percent for first year, and by 4.4 percent for second year--17.9 percent for two-year period.	...
School Management (105)	Ithaca, N.Y.	Enable potential dropouts to earn money while going to school	50 potential dropouts who had taken basic course in retailing--screened and chosen on basis of probable success	None	Work-study program--distributive education. Students take regular courses toward high-school diploma and work 600 hours during school year for 1 hour of credit; students matched with employer, who must supervise and teach in field of retailing.	Of 50 participants in 2-year period, none have dropped out of school. Authors say "most have marketable ability in area of retailing."	...
Bienenstock and Sayres, 1964 (7)	N.Y. State, 10 cities	Provide potential dropouts with educational and work experience that will enable them to succeed in full-time employment if they drop out, or motivate them to return to regular school program	793 identified by school as potential dropouts--15 years old or older	None	Subjects must want to take part in program, must have good prognosis for rehabilitation, and must have parental consent. Spend 2-4 periods per day in regular classes, 1 in class on general work orientation, and 3-4 periods in work.	During 1-year period, 44% completed the year in the program, 27% returned to normal school because of satisfactory progress, 11% began full-time employment, 13% removed from program because of unsatisfactory progress, and 5% dropped out of school. The percentage of dropouts was slightly lower in New York City, but the percentage of those either completing the program or returning to regular school was slightly higher in upstate districts (75.5%) than in New York City (69.3%).	...
Bienenstock (7)		Follow-up study of 1961-62 STEP participants and controls--1 year after completion of program	175 potential dropouts 15 years and older	165 with "similar characteristics" in regular school programs	Information from records and employers.	Greater percentage of subjects (37%) than controls (22%) in regular school program and doing satisfactory work or in full-time employment (21% and 9%). No information on 24% of subjects and 40% of controls.	...

programs in school systems serving low-income families. Money may be spent to increase quality and quantity of teachers, enrich curriculum and instructional materials, study the dropout problem, increase guidance facilities, and provide financial assistance to needy students. The National Defense Education Act of 1958, and its later amendments, also benefit local school systems. Title III allows purchase of supplementary instructional materials and equipment, and Title V appropriates funds for guidance and counseling programs. Assuming that lack of interest in school, lack of individual attention from teachers, inadequate instruction, lack of guidance, or financial need are among the reasons for withdrawal from school, these programs may indirectly have a positive effect on school retention.

The Vocational Education Act of 1963 may help those boys and girls who drop out partly because they see no relationship between high-school classes and the world of work. The Act provides for the financing of high-school vocational education programs and for the construction of area vocational education facilities. It also provides funds for adult education courses and full-time programs for high-school graduates and dropouts.

Those preschool children who are destined to have school difficulties because of their economically and culturally disadvantaged environments may be helped by the Head Start program.

For those who have already dropped out, there is the Job Corps of the Economic Opportunity Act of 1964. Residential centers provide comprehensive vocational training and basic education for youth. For older, untrained nongraduates, there is the Manpower Development and Training Act of 1961.

Most of these programs outlined above are carried on outside, or partially outside, the school; they skirt the problem of the school dropout, and are not specifically directed toward him. One program, however, directs its attention specifically to the dropout or potential dropout. This is the Neighborhood Youth Corps (NYC), another program developed under the Economic Opportunity Act. It is for economically disadvantaged youth only. It provides work experience, at a rate of $1.25 an hour, to enable youth to (a) stay in school, (b) return to school, or (c) obtain work experience and develop good work habits if they are out of school and out of work.

The Neighborhood Youth Corps has as its primary purpose financial assistance and work experience; enrollees are not taught specific job skills. They are given counseling and medical assistance. Jobs are not permanent, however, and success will be a long-range measure of what happens to enrollees after they complete the program. The 1966 Manpower Report to the President[3/] reported that in one Detroit school, the dropout rate for NYC enrollees was 4.2 percent, compared with 9.7 percent for all students.

Results of the NYC program in Ithaca, New York (105), show that, of the 63 potential dropouts who had participated, all except those who had graduated were back in school and in the NYC or another program in the school district. Ten of the 20 nonstudent participants decided to get more education.

Programs Sponsored by Other Interested Agencies

Agencies apart from the school and the government have become interested in the problem of school dropouts. The San Francisco Housing Authority, for example, provides potential dropouts living in its housing projects with part-time work. The students work four hours a day and attend classes four hours. The Authority hopes that, in addition to providing the student with pocket money, it will give the student some realization of the further education necessary for permanent employment (108).

Other agencies provide adult education courses for their employees. The Carson Pirie Scott Company, a large Chicago department store, has a program directed exclusively to recent dropouts. After completing a three-week course in basic skills needed for department store work, the employee works three days a week for the store and attends academic courses the other two days (108:101).

Summary

While the goal of public education in the United States appears to be a free education through high school for all able youth, figures show that about 29 percent of the nation's potential high-school graduates of 1965 withdrew from school before graduation. This is considered a problem not only because of a loss to the youth, in terms of self-fulfillment and economics, but also an economic and manpower loss to our nation.

Research on the subject of early school withdrawal--its causes and its consequences--is abundant. Results of research are inconclusive and often not comparable, because of the design and conduct of the study, the population studied, or the bias of the investigator.

3/ U. S. Department of Labor. Manpower Report to the President and A Report On Manpower Requirements, Resources, Utilization, and Training. Washington, D.C.: the Department, March 1966. p. 103.

Research has shown that rather than a single cause, there is usually a cluster of factors associated with school withdrawal or characteristic of the school dropout. These characteristics may be found in one or more of the areas of (a) factors unique to the individual, (b) school-related factors, (c) family-related factors, or (d) community-related factors.

Programs for school dropouts are becoming increasingly common and include a wide range of preventive and remedial activities. School-sponsored programs for potential dropouts usually take the form of special classes, with a curriculum different from that of classes for potential persisters. Other programs include special attention from school personnel, especially counselors, and school clubs designed to meet a variety of needs of potential dropouts. Research on the effectiveness of such programs in achieving stated goals seems to be particularly lacking.

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